

California State University, San Bernardino

**CSUSB ScholarWorks**

---

E Clampus Vitus

Special Collections & Archives

---

1996

## Archives of Keepsakes Clampouts Vol. 3 Pt. 5

CSUSB

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/e-clampus-vitus>

---

### Recommended Citation

CSUSB, "Archives of Keepsakes Clampouts Vol. 3 Pt. 5" (1996). *E Clampus Vitus*. 1.  
<https://scholarworks.lib.csusb.edu/e-clampus-vitus/1>

This Publication is brought to you for free and open access by the Special Collections & Archives at CSUSB ScholarWorks. It has been accepted for inclusion in E Clampus Vitus by an authorized administrator of CSUSB ScholarWorks. For more information, please contact [scholarworks@csusb.edu](mailto:scholarworks@csusb.edu).

October 24, 1942. Two fields in operation on night flying.

October 26, 1942. Lt. Stockton crashed on Deadman Lake in a BT while supervising night flying there, killing himself and demolishing ship.

October 29, 1942. Flying schedule stepped up to 24 hours per day. day shifts and two night shifts.

November 10, 1942. Class 42-23 finished course 16 days late. Class 42-25 (150 students) started course.

November 16, 1942. One TG-5 and several TG-6's damaged by windstorm of previous night.

## REFERENCES

Kidwell, Art; In The Shadow of the Palms Volume 2 Desert Moon Press 1987  
Chapters 40, 42 and 43

Ludwig, Colonel Verle E.; U.S. Marines at Twentynine Palms, California  
History and Museums Division Headquarters U.S. Marine Corps Washington D.C. 1989

Shettle, M.L., Jr.; United States Naval Air Stations of WWII Schaertel Publishing Company 1997

Slaten, Dr. A.; Wakefield Soaring Sails Skyways Magazine, November, 1942

Thompson, Norman D.; Flight Operations Manager Condor Log Glider Operations  
March 20, 1943

The Glider Pilot Training Program 1941-1943 USAF Historical Division, Archives Branch, Maxwell Air Force  
Base, Alabama

The Flying Condor, March, 1943 April, 1943 Twentynine Palms Air Academy

Weight, Lucile; The Big Birds of Twentynine Palms The Desert Trail, July 1, 1976

Photos from archives of Twentynine Palms Historical Society  
Harlow W. Jones was the official photographer of Condor Field

Draft prepared by Al Gartner  
Twentynine Palms Historical Society

# GRUB STUB PRESENT TO COOK

---

BILLY HOLCOMB CHAPTER • FALL CLAMPOUT

THE ANCIENT & HONORABLE ORDER OF E CLAMPUS VITUS

---

**CONDOR FIELD** • OCTOBER 7th, 8th, 9th, 6010

---

PRESENT THIS GRUB STUB OR YOU WILL NOT EAT

---

CAPUT TUUM IN ANO EST — ST VITUS LIVES

---



Let's Keep 'Em Flying



The Ancient and Honorable Order of E Clampus Vitus

# **Billy Holcomb Chapter 1069**

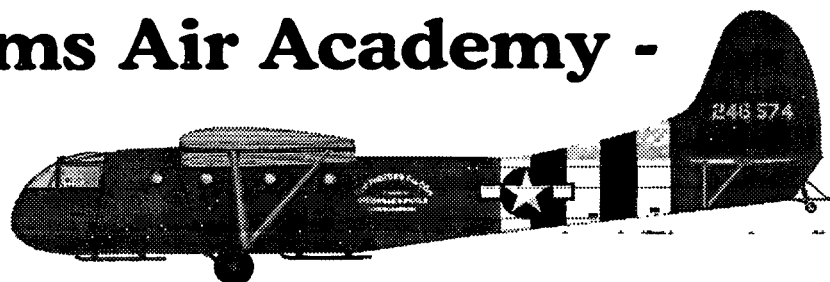
Post Office Box 56086 • Riverside • California • 92517



BILLY HOLCOMB CHAPTER 1069 OF THE  
ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS

ANNOUNCES ITS

## **36th Annual FALL CLAMPOUT CONDOR FIELD - 29 Palms Air Academy -**



**OCTOBER 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 2005**

**RUB: REDSHIRTS \$50 AND PBCs \$60**

CONTAINER FIRES OK BRING ARTIFICIAL SHADE,  
LOTS OF WATER (DRY CAMP), YOUR FAVORITE  
BEVERAGES, COOL CLOTHES FOR HOT DAYS AND  
WARM CLOTHES FOR COOL NIGHTS.

**Billy Holcomb ECV Land Fund  
donations accepted.**

**BE SURE TO BRING YOUR FAMILY AND  
FRIENDS TO DEATH VALLEY  
FAM-CAMP AT STOVE PIPE WELLS  
NOVEMBER 11, 12 & 13, 2005 FOR  
FOOD, FUN AND PARADE AT FURNACE CREEK.**



**HELD UNDER THE REIGN OF NOBLE GRAND HUMBUG  
BOB "SHORTNECK" GREEN**



# CLAMPSCHEDULE

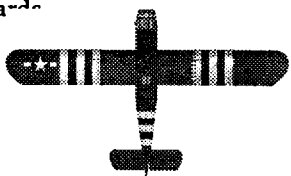
## FRIDAY

- 4:00 pm CHECK-IN (Unofficial) At The Official Place.
- 6:30 pm DINNER Is Served By Clampchef Rick Gavigan And His Crew Of Culinary Experts At The Cookshack
- 7:01 pm GREYBEARDS DINNER For All Visiting Indignitaries: XNGHs, Humbugs, And Officers.....At The Cookshack
- 7:32 pm Check-In Is Open. All PBCs Report To The Hangman

## SATURDAY

- 6:01 am All PBCs Report To The Hangman's Camp
- 6:46 am PBCs & SPONSORS meet at the Cookshack for Breakfast with the Hangman
- 6:57 am BREAKFAST Is Served At The Cookshack
- 7:20 am PBCs Report To The Cookshack For Cleanup
- 8:10 am CHECK-IN Is Open (At The Official Place) And It's Official!
- 8:30 am Presentation Of PBCs To The Greybeards For Inspection, Enlightenment, Clamphistory, And Recitation On "How Gooood It's Gonna Be"
- 9:30 am Sign-Ups For Clamper Olympics
- 9:53 am PBCs Leave For Monument Erection
- 10:17 am Clamper Olympics Begin
- 12:02 pm LUNCH Is Served At The Cookshack
- 12:35 pm PBCs Report To The Cookshack For Cleanup
- 1:30 pm All PBC's Report to the Hangman's Camp
- 3:00 pm PBC Entertainment, Including IQ Test And Singing
- 5:16 pm DINNER Is Served At The Cookshack
- 5:45 pm PBCs Report To The Cookshack For Cleanup
- 7:12 pm PBCs Report To The Hangman's Camp For Preparation For The Queries And The Ordeals
- 8:00 pm Candlelight Ceremony Of Induction At The Hall Of Comparative Ovations.... Additionally, Raffle Prizes And Clamper Olympics Awarded

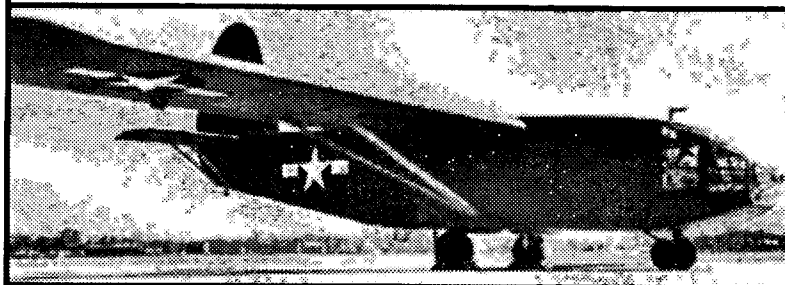
## SUNDAY



- 6:30 am All PBCs Report To The Hangman's Camp
- 7:01 am Breakfast Is Served At The Cookshack
- 7:57 am Camp Clean-Up By Everyone! Use The Dumpster.... Leave Nothing Behind!
- 10:30 am Plaque Dedication At The Monument Site. X-PBC Certificates And Membership Cards Distributed After Dedication

**BRING A GOOD ATTITUDE, WATER (DRY CAMP),  
AND YOUR FAVORITE BEVERAGES.  
CLAMPSITE AVAILABLE TO ALL VEHICLES.**

**"LET A BROTHER OF SOBRIETY  
HOLD THE REINS!"**

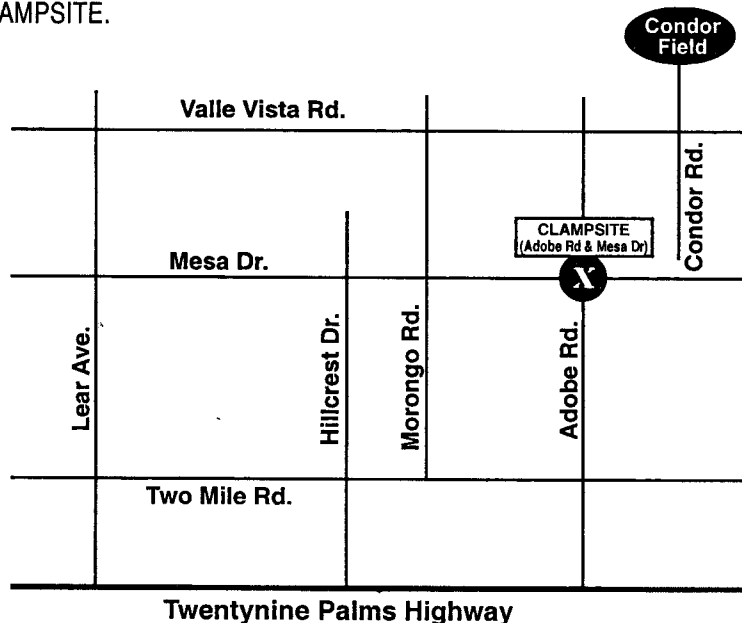


## **DIRECTIONS TO FALL CLAMPOUT:**

THE FALL CLAMPOUT IS AT CONDOR FIELD NEAR THE TWENTYNINE PALMS MARINE BASE. WE WILL COMMEMORATE CONDOR FIELD WHICH WAS A GLIDER PILOT TRAINING SCHOOL DURING WWII.

THE CLAMPSITE IS LOCATED OFF ADOBE RD. NEAR MESA DR. ABOUT HALF WAY BETWEEN TWENTYNINE PALMS HIWAY (HIWAY 62) AND THE MAIN GATE OF THE MARINE BASE WHICH IS ON CONDOR RD, IF YOU GET TO THE MAIN GATE YOU HAVE GONE TOO FAR. DO NOT TRY TO GO ONTO THE BASE.

IF YOU ARE COMING FROM THE WEST - GO TO HIWAY 62 TO YUCCA VALLEY TO JOSHUA TREE THRU TWENTYNINE PALMS TO ADOBE RD. TURN LEFT. THE CLAMPSITE IS ON THE LEFT NEAR MESA DR. IF YOU ARE ARRIVING FROM THE EAST ON HIWAY 62 (TWENTYNINE PALMS HIWAY) TURN RIGHT ON ADOBE RD. AND GO TO THE CLAMPSITE ON THE LEFT. FOLLOW THE SIGNS TO THE CLAMPSITE.



PLEASE FILL OUT THIS ENTIRE FORM AND SIGN

# THE ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS

## Agreement and Release from Liability

1. I, \_\_\_\_\_ (print your name here) acknowledge that I have voluntarily requested to accompany the Ancient and Honorable Order of E Clampus Vitus for the purpose of dedication various plaques and/or monuments to major and lesser events of California history.

2. I AM AWARE THAT THE MEETINGS OF THE ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS OCCUR IN THE WILDERNESS, AND THAT: DRIVING FROM MY POINT OF DEPARTURE TO SAID MEETING, HEREINAFTER CLAMPSITE; MY PARTICIPATION IN THE VARIOUS ACTIVITIES AT SAID CLAMPSITE AND DRIVING BACK TO MY POINT OF DEPARTURE ARE POTENTIALLY DANGEROUS AND HAZARDOUS ACTIVITIES. I AM VOLUNTARILY PARTICIPATING IN THESE ACTIVITIES WITH THE KNOWLEDGE OF THE DANGER INVOLVED, AND HEREBY AGREE TO ACCEPT ANY AND ALL RISKS OF INJURY AND DEATH, AND VERIFY THIS STATEMENT BY PLACING MY INITIALS HERE \_\_\_\_\_ INITIAL HERE

3. As consideration for being permitted by the Ancient and Honorable Order of E Clampus Vitus to participate in these activities, I hereby agree that I, my assignees, heirs, distributees, guardians, and legal representatives will not make a claim against, sue, or attach the property of the Ancient and Honorable Order of E Clampus Vitus or any of its officers or members for injury or damage resulting from negligence or other acts, howsoever caused, and by any member, agent, or officer as a result of my participation in or travel to and from the CLAMPSITE. I hereby release the Ancient and Honorable Order of E Clampus Vitus and any of its officers or members from all actions, claims, or demands that I, my assignees, heirs, distributees, guardians, and legal representatives now have or may have for injury or damage resulting from my above-described participation at the CLAMPSITE.

### KNOWING AND VOLUNTARY EXECUTION

4. I HAVE CAREFULLY READ THIS AGREEMENT AND FULLY UNDERSTAND ITS CONTENTS. I AM AWARE THAT THIS IS A RELEASE OF LIABILITY AND A CONTRACT BETWEEN MYSELF AND THE ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS, ITS OFFICERS, AND MEMBERS AND I SIGN IT OF MY OWN FREE WILL.

Executed at \_\_\_\_\_, California, on \_\_\_\_\_ 20\_\_\_\_\_.

Releasor \_\_\_\_\_  
(signature required)

☐ Check here if this is a new address.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

e-mail \_\_\_\_\_

PBC's name \_\_\_\_\_  
(please include pbc application)

Chapter \_\_\_\_\_

☐ check here if you are a XNGH or NGH

Make your payment out to:

**BILLY HOLCOMB ECV**

Mail your payment to:

**Paul Renner • Gold Dust Receiver**  
**1820 Arlington Ave. • Torrance, CA 90501**

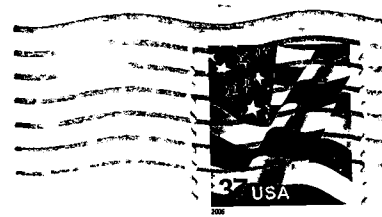
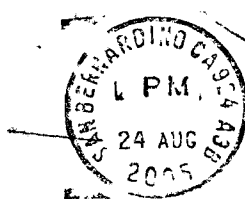
_____ \$50.00	Here is my gold dust, I'll be there!
_____ \$60.00	I'm bringing a PBC, here is his money
_____ \$60.00	My payment is late (after Sept. 23, 2005)
_____ \$5.00	My jackass is sick, keep me on the list
_____	I want to buy a special event shirt.
_____	Add price from the chart below.
_____	<b>Total Payment</b>

#### CHOOSE YOUR SHIRT SIZE

Small • Medium • Large • X-Large	XX-Large	XXX-Large
○ \$16.00	○ \$17.00	○ \$18.00

**NO PROMISE OF SHIRT FOR LATE SIGN-UPS!!**

Neal Samson - Grand Noble Recorder  
14052 Pear Street  
Riverside, CA 92508



29 PALMS AIR ACADEMY

**CONDOR FIELD**

OCT. 7, 8 & 9, 2005

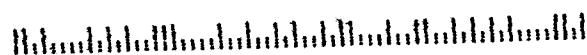
FIRST CLASS MAIL



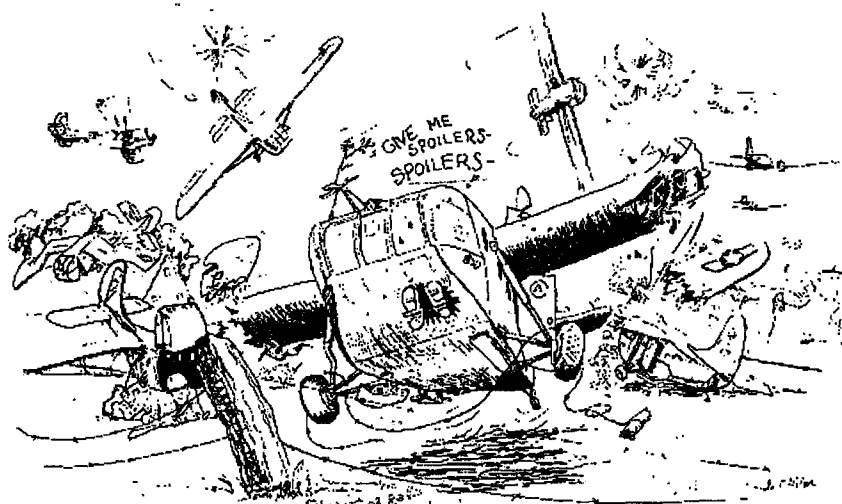
*To Clamper:*

Holdaway-Archivist, Phil  
3559 N. Wall Ave.  
San Bernardino, CA 92404

92404+2273-89 COL1



**BRING A PBC TO CONDOR FIELD...**



[www.billyholecomb.com](http://www.billyholecomb.com)



# PETITION FOR MEMBERSHIP

E CLAMPUS VITUS  
BILLY HOLCOMB CHAPTER 1069

## TO THE GRAND NOBLE RECORDER:

I hereby petition for membership in the Ancient and Honorable Order of E Clampus Vitus. I certify that I have received my novitiate instruction from my sponsor, Clamper \_\_\_\_\_ and hereby solemnly affirm my belief in the Dictum of the Order, "PER CARITATE VIDUARIBUS ORPHANIBUSQUE, SED PRIME VIDUARIBUS" and wholeheartedly, without reservation, agree to render SATISFACTORY SERVICE at all times.

I further agree to present myself at the ECV Hall of Comparative Ovations at such time and place designated by the NOBLE GRAND HUMBUG, guaranteeing that I shall arrive fully equipped to negotiate the Chasm of Terror and Despair and to reach the safe haven of CLAMPERDOM.

As evidence of my good faith, I forward herewith my gold dust (\$ \_\_\_\_\_) in payment of the initiation fee usually charged each POOR BLIND CANDIDATE. In return I humbly beseech you to transmit my Badge of Office which I will proudly wear when presenting myself for infamous induction. I realize that without this Badge of Office, the Grand Hangman and the Damnfool Doorkeeper cannot permit me to enter the Hall of Comparative Ovations.

Be it known, if you are accepted and inducted, that to remain a Clamper you must attend each and every Clampout or send the required gold dust for remaining active if you can't make it.

Application received \_\_\_\_\_

Witness my Hand and Privy Seal

Application approved \_\_\_\_\_

Application rejected \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

Ritual taken \_\_\_\_\_

Scroll mailed \_\_\_\_\_

Illegal Signature

TO BE DETACHED ONLY BY THE GRAND NOBLE RECORDER

## PBC APTITUDE TEST (to be filled out by P.B.C.)

	check	yes	no
I am a jolly good fellow .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am interested in California / Arizona / Nevada / Utah History ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(state any Special Field .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can draw or cartoon .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can sing .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy theatrical work .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I play a musical instrument .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(state which kind .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am willing to help if called upon .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not a jolly good fellow .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(For G.N.R.) Clampering .....			

## FOR P.B.C. TO FILL OUT. PLEASE PRINT

Full Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone # ( ) \_\_\_\_\_

Occupation \_\_\_\_\_

Age \_\_\_\_\_ Place of Birth \_\_\_\_\_

## CHAPTER OFFICERS 2006

### CLAMPARTRIARCH

Mike Johnson XNGH • 951-785-8820  
jfam4fun@aol.com

### NOBLE GRAND HUMBUG

J.J. Jackson NGH • 909-862-1277  
rvfriendly@earthlink.net

### VICE HUMBUG

Paul Renner • 310-781-3798  
ecvwarhorse@hotmail.com

### GOLD DUST RECEIVER

Neal Samson • 951-780-3179  
Nealsamjam@cs.com

### GRAND NOBLE RECORDER

Rick Gavigan • 909-337-9886  
haveclampwilltravel@earthlink.net

### CLAMPCHIEF

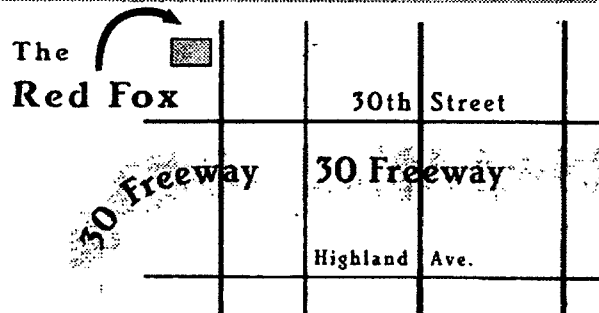
Brian Nash • 626-590-8841  
brian.nash@wellsfargo.com

### STOREKEEPER

Cass Ellsworth • 951-776-1817  
zyzxx1069@sbcglobal.net

### GRAND HANGMAN

Doyle Teel • 714-649-4439  
emaildoyle@yahoo.com



**THE RED FOX**

3142 North "E" Street • San Bernardino

## The Ancient and Honorable Order of E Clampus Vitus **BILLY HOLCOMB CHAPTER 1069** SCHEDULE OF EVENTS 6011-2006

**FEB. 2, 3, 4, 5, 2006**

**1905-1907 Nevada  
Centennial Boom Town  
History Celebration**

**Sponsored by:**

**Death Valley '49ers,  
Nevada Mining Assc.,  
Billy Holcomb and  
Queho Posse Chapters  
of E Clampus Vitus**

**...et al.**

**Call for Info:**

**Gary Bancroft  
909-338-1926**

**Volunteers needed for  
cooking!!!**

January 4, 2006	General Meeting
January 7, 2006	Emperor North Day
January 20, 21, 22, 2006	Vituscan Winter Trip
January 28, 2006	Billy's Birthday Party
February 1, 2006	General Meeting
February 2, 3, 4, 5, 2006	NEVADA CENTENNIAL BOOM TOWN HISTORY FAMILY EVENT!!!!
March 1, 2006	General Meeting
March 17, 18, 19, 2006	H.E.M.O.R.R.H.O.I.D. TRIP
April 5, 2006	General Meeting
April 15 <sup>th</sup> - April 18 <sup>th</sup> , 2006	Work Party 8:00 am
May 5, 6, 7, 2006	<b>SPRING CLAMPOUT</b> <i>Desert Strike</i>
May 19, 20, 21, 2006	Grand Council of ECV 40-43 chps.
June 7, 2006	General Meeting
June 10, 2006	Work Party 8:00 am
July 5, 2006	General Meeting <i>maybe a Parade</i>
July 21, 22, 23, 2006	T.R.A.S.H. Trek
August 2, 2006	General Meeting
August 18, 19, 20, 2006	Vituscan Summer Trip <i>Lake Hemet</i>
September 6, 2006	General Meeting
September 9, 2006	Work Party 8:00 am
October 13, 14, 15, 2006	<b>FALL CLAMPOUT</b> <i>6-Way California 20-Mule Team Rte.</i>
November 1, 2006	General Meeting
November 4, 2006	Work Party 8:00 am
November 9, 10, 11, 12, 2006	<b>DEATH VALLEY</b>
December 6, 2006	General Meeting
January 19, 20, 21, 2006	<b>Winter Vituscan Trip</b> <i>Halloran Summit</i>

Billy Holcomb Chapter 1069 holds its monthly meeting at The Red Fox, a watering hole located at 3142 N. "E" St. in San Bernardino. All redshirt members are welcome to attend and help the Chapter, and meet with your friends. All meetings start promptly at 7:00 p.m. Meeting dates listed above.

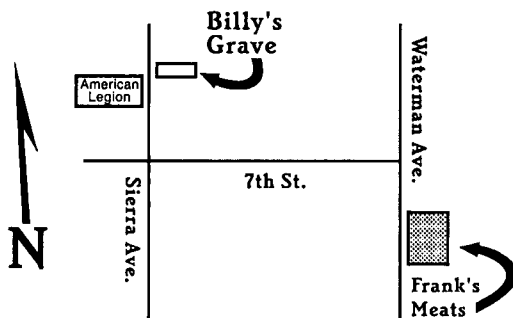
We have several scheduled work party dates where volunteers can help maintain and repair the Chapter equipment. All of the work parties listed above are at the home of Jim Phillips in Riverside. You can get directions at 951-789-7071. Food and beverages served to those who come and help!!

# Happy Birthday BILLY HOLCOMB

Billy Holcomb Chapter 1069  
E Clampus Vitus

**JANUARY 27, 6006    Noon - 5**

Humbug Howard "Da Mohel" Robinson invites all redshirts and their families to help celebrate Billy Holcomb's Birthday on Jan 27, 2001. We will meet at the Pioneer Cemetary in San Bernardino at Billy's grave for a short ceremony, and then proceed to Frank's Meats, just one block away, to finish our celebration with birthday cake for everyone! Frank's is offering a half-pound burger and a domestic beer or 21oz soda for just 2 bucks or a chili-size for just 3 bucks!



**BRING  
YOUR  
FRIENDS  
& FAMILY !**

**Mansel Hutsell - Recorder**  
**56330 Skyline Ranch Rd**  
**Yucca Valley, Ca. 92284-2052**

**Happy**  
**Birthday**  
**BILLY HOLCOMB**

---

FAIRBANKS SPRINGS  
Nye County, Nevada February 5, 2006

Februrary 8, 2006

**OUR HISTORY**  
**The right man, the right time**  
**FAIRBANKS A TOUGH BUT FRIENDLY BUSINESSMAN**

**By PHILLIP GOMEZ**  
**PUT**



**PHILLIP GOMEZ / PUT**

**Brian Brown, with microphone -- great-grandson of R.J. "Dad" Fairbanks -- was on hand Sunday at Fairbanks Spring, located in the middle of the Amargosa Desert, on the far edge of nowhere, Nevada, U.S.A. The honorable order of E. Clampus Vitus, Southern Nevada and San Bernardino, Calif., chapters, dedicated a monument to the pioneer merchant, whose tent hostelry at the site once provided travelers with whiskey and a game of cards, among other "essentials."**



## **Advertisement**

**Brian Brown of China Ranch told the small crowd of sightseers and members of the E. Clampus Vitus fraternal organization that his great-grandfather was "not a good fit" in the rural Mormon community of Payson, Utah where he had obtained his bride and tried farming as a young man.**

**Wandering Nevada's deserts, his great-grandfather, then 19 years old, became a freighter out of San Bernardino, Calif., a Mohave Desert freighting center, eventually siring 11 children.**

**"R.J. would be glad to see so many people here, and I'm sure he'd invite you to have a drink or play a game of poker," said Brown.**

**As part of a grading crew building the Salt Lake & San Pedro Railroad from Salt Lake City to Los Angeles in 1905, R.J. "Dad" Fairbanks arrived at a wide place on the tracks called Las Vegas, then just a dusty, windy whistle-stop with a nearby water source.**

**Fairbanks believed the town, which celebrated its centennial last year, would never amount to anything worthwhile. So he moved his family to Ash Meadows, where he believed the real action and money was going to be.**

**There near a crystal-clear spring, Fairbanks established his trading post - one that could have turned into a boomtown but for the luck of the draw. Today nothing but the spring remains on what is part of Ash Meadows National Wildlife Refuge.**

**Travelers would take the stage from the Las Vegas & Tonopah Railroad depot, near today's Johnnie, for the Bullfrog diggings at Greenwater, in today's Death Valley National Park. They would pass right by Fairbanks' tent hotel establishment on the freighting-stage road.**

**Dad would sell them a glass of whiskey to cut the dust and had a small restaurant, as well as a private tent "room" for the night, with female companionship if desired. Fairbanks also hauled water and passengers along the route as a sideline of his business.**

But when the Bullfrog excitement went bust, Fairbanks moved his family again to another whistle-stop called Zabriskie Station along another railroad then building through the Amargosa Valley from Southern California, the Tonopah & Tidewater "road."

Once he gathered sufficient lumber, scarce in the desert, Fairbanks built a proper hotel and store. Fairbanks would pack up his family again and again, moving wherever opportunity knocked. He moved his entire enterprise three times, along with his family.

Coming north to Shoshone, Calif., the Fairbanks rested for a while. There he settled the building and founded the town, both that still remain.

Fairbanks moved a final time to Baker, Calif., south of Tecopa, where he had a desert way station along what would become Interstate 15. In those early days of automobile travel, Fairbanks' business prospered, as it was the only stopping point for gas between Bakersfield and Las Vegas. His descendants are found throughout the area today.

"He was ripe for the times," said his great-grandson. "He was a rough old character."

"History is what we're about," said Mark P. Hall-Patton, historian for E. Clampus Vitus, the group that put up Fairbanks' monument.

"'Credo quia absurdum' (Latin for 'I believe because it is absurd') is one of our mottos," said Hall-Patton, citing a frequently misquoted passage from the Latin text by the Roman Tertullian. "De Carne Christi" was a Catholic apologia or justification against the heresy of Docetism, which denied the doctrine of Jesus' mortality and Resurrection. "Certum est, quia impossibile" means, "Certain it is that He rose again, because it is impossible."

The expression is used by existentialists to denote an absurd belief, unfettered by logic or rationality.

"It's absurd to go out in the middle of the desert and haul out

concrete and put up a sign," Hall-Patton said.

The fraternal group is also working with the Nevada Department of Transportation on another existentialist project: They're now awaiting approval from NDOT to put up a sign to locate precisely the Don Schmidt line along the Old Spanish Trail Highway.

The Don Schmidt line is itself a curiosity in Nevada history: It's the wayward 1873 survey by Col. Alexey W. Don Schmidt marking the 400-mile-long oblique boundary line between Nevada and California, from the center of Lake Tahoe to the Colorado River.

But because the Colorado River had shifted when Don Schmidt conducted the survey, his imaginary line was short by a country mile of the river's intersection with 35-degrees latitude, the true southeastern California state line. The U.S. Supreme Court settled the issue in 1980, Nevada losing ground to its neighbor.

"We like having fun," said Hall-Patton. "We're serious about the history, but not much else. Our leader is called the Noble Grand Humbug. I'm a Dead Salmon by title."

"Dad would have understood," Brown said. "Or maybe he'd have just set up drinks on the house."

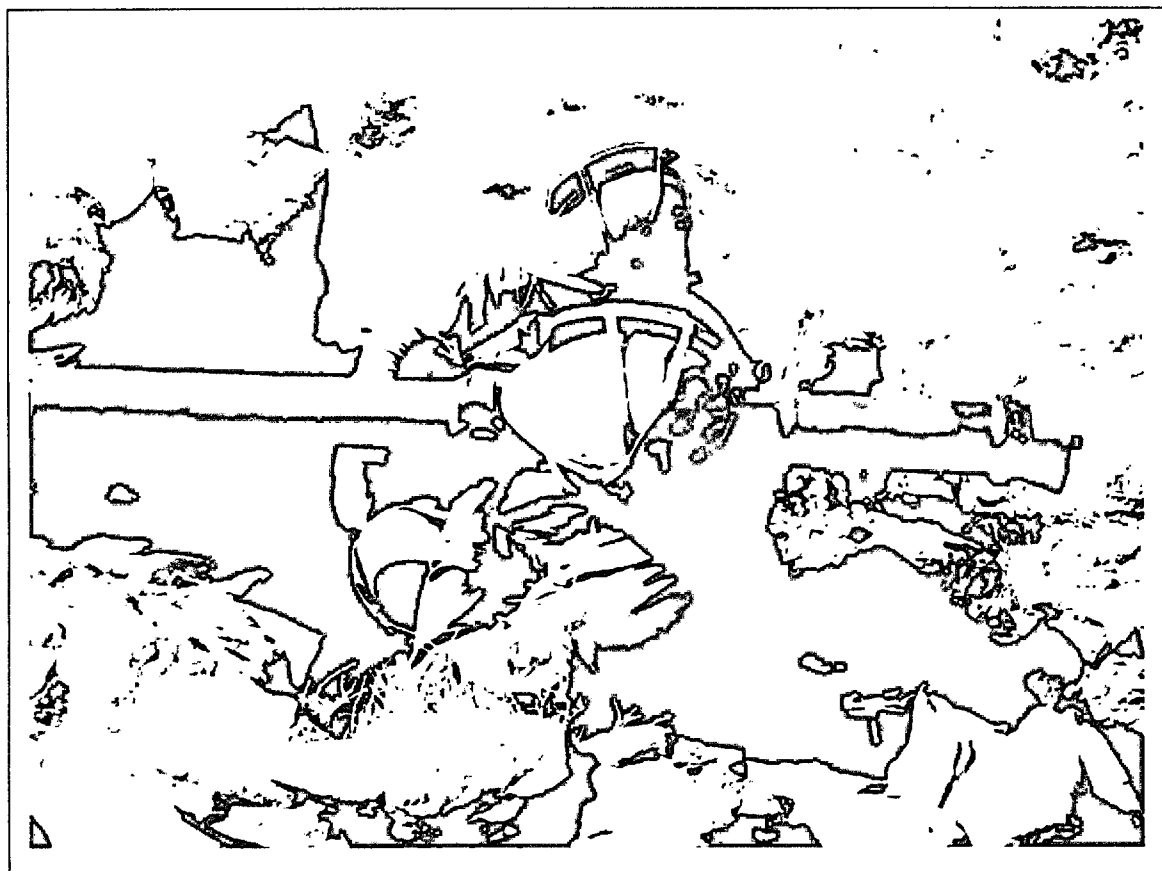
For comment or questions, please e-mail  
[webmaster@pahrumppvalleytimes.com](mailto:webmaster@pahrumppvalleytimes.com)  
Copyright © Pahrumpp Valley Times, 1997 - 2006



THE ANCIENT AND HONORABLE ORDER OF  
E CLAMPUS VITUS  
BILLY HOLCOMB CHAPTER 1069

PRESENTS

*DESERT STRIKE REVISTED*



FIRST EDITION  
COMPILED BY NOBLE GRAND HUMBUG JAMES 'JJ' JACKSON.  
RESEARCH HELP FROM ROGER G. BATY, FRANCIS BLAKE  
AND ROLLA QUEEN



**THE ANCIENT AND HONORABLE ORDER OF  
E CLAMPUS VITUS  
BILLY HOLCOMB CHAPTER 1069**

UNDER THE AEGIS OF  
JAMES 'JJ' JACKSON  
ANNOUNCES

***DESERT STRIKE REVISTED***

**SPRING CLAMPOUT 6011**

**MAY 5,6, 7 2006**



**AS RECORDED BY THE NOBLE GRAND HUMBUG,  
WITH RESEACH HELP FROM ROGER BATY, FRANCIS  
BLAKE AND ROLLA QUEEN**

## DESERT STRIKE

In May 1964, U.S. Strike Command (STRICOM) launched the largest military war game since World War II. Known as Joint Exercise Desert Strike, this two-week training exercise simulated a nuclear air and ground battle between the mythical governments of NEZONA and CALONIA over water rights within the Colorado River water shed south of Las Vegas. Two joint task forces, Mojave and Phoenix, involving 100,000 U.S. Army and Air Force personnel, and utilizing over 900 aircraft and 500 tanks, were mobilized to fight for their respective governments. An important training innovation was the creation of an official War Cabinet for each country to lend realism to the games and introduce a political dimension to the escalation of nuclear war requiring judgments about when nuclear or chemical weapons should be used. On May 25, 1964, the 1st Battalion 'Tomahawks' under the command of Colonel Robert S. Dickson - the 501<sup>st</sup> 'Geronimo' Parachute Infantry Regiment, 101<sup>st</sup> Airborne Division 'Screaming Eagles' - were parachuted 30 miles behind 'enemy' lines near this vicinity. It was 1<sup>st</sup> Lieutenant Dickson who, prior to D-day during World War II, had given the 101<sup>st</sup> Airborne Division their renown name, the 'Screaming Eagles.' Fulfilling their Desert Strike mission, they seized a critical pass held by 'enemy' armor units. An umpire halted the exercise shortly after contact with the enemy was made. Desert Strike also led to new tactics for military river crossings on the nuclear battlefield. When NEZONA invaded CALONIA, instead of using a single, concentrated troop crossing across the Colorado River, new tactics required numerous crossings along a broad front to diminish the effects of a theater-wide nuclear detonation. This training maneuver took place on more than 13 million acres of public and private lands in the California, Nevada, and Arizona deserts at a cost of 54 million dollars, or 540 dollars per man. This monument is dedicated to the Cold War veterans who served here and especially for the thirty-two warriors who gave their lives during this exercise which in itself, contributed to the end of the Cold War.

This plaque placed by the Ancient and Honorable Order of E Clampus Vitus,  
BILLY HOLCOMB CHAPTER 1069 and the 101<sup>st</sup> Airborne Division Association.

In Cooperation with the United States Department of Interior  
BUREAU OF LAND MANAGEMENT  
PALM SPRINGS FIELD OFFICE

May 7, 2006

# DESERT STRIKE REVISITED

## U.S. ARMY FORCES

Joint Task Force MOJAVE



XVIII AIRBORNE CORPS



2nd BRIGADE  
40th ARMORED DIVISION

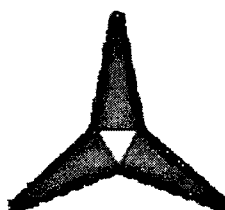


101st AIRBORNE DIVISION



1st ARMORED DIVISION

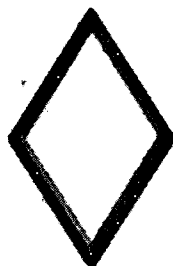
Joint Task Force PHOENIX



III CORPS



2nd ARMORED DIVISION



5th INFANTRY DIVISION

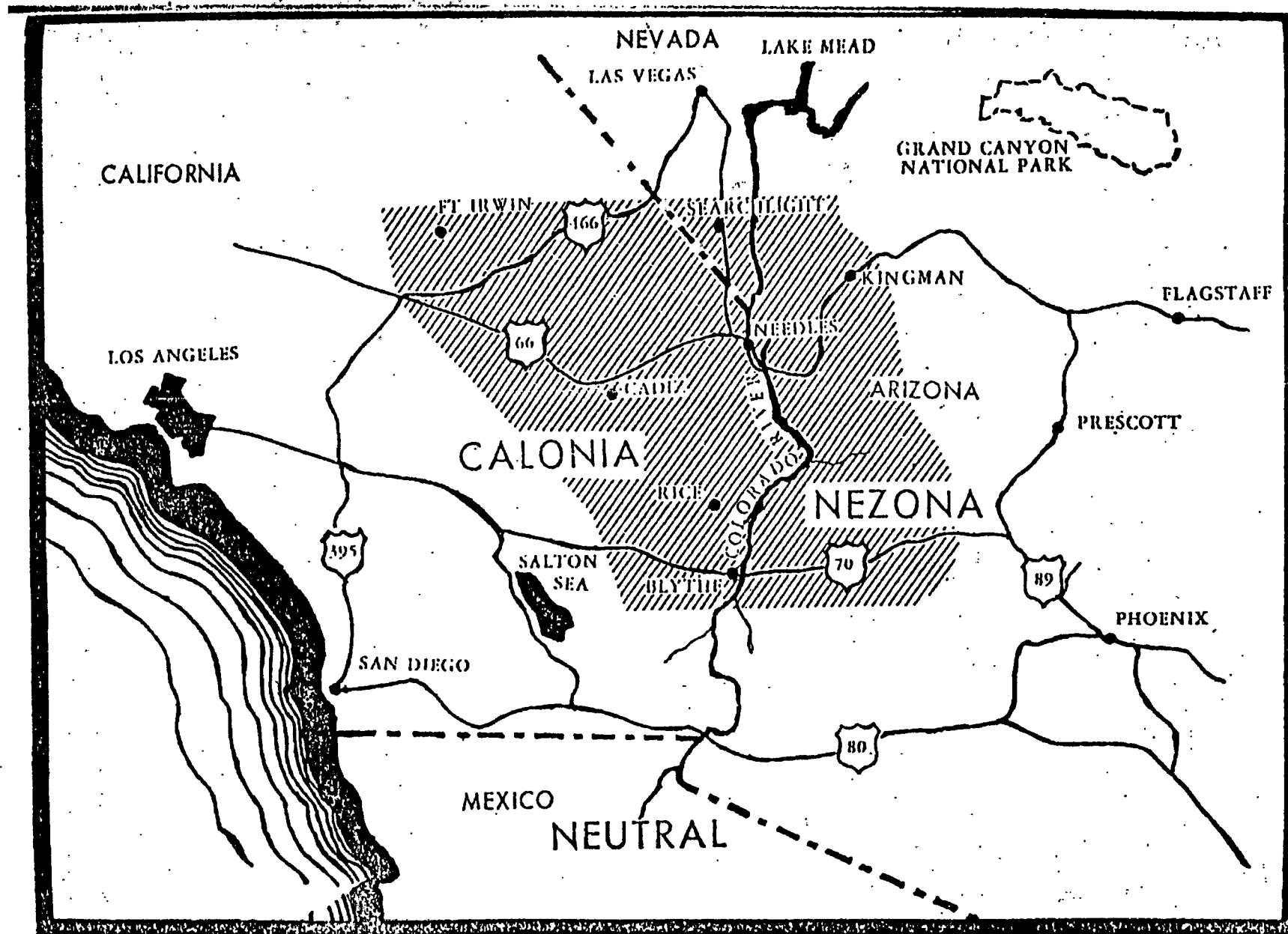


258th INFANTRY DIVISION



191st INFANTRY BRIGADE

ECV • May 5, 6, 7, 2006



MAP 20 -- CALIFORNIA-ARIZONA MANEUVER AREA, EXERCISE DESERT STRIKE, 1964



Tuesday, July 20, 2004

## **Backward Glance by Steve Smith**

### **Operation Desert Strike takes over area**

Playing games has a bad reputation as being a frivolous activity but a lot can be learned in this way. The military has learned this lesson, and in May of 1964 staged one of the biggest war games that our country has seen.

First mention of the Desert Strike War Game, as this event was called, was in the Jan. 15, Desert Dispatch. It was announced that plans for a massive war game were being finalized. The game would take place over three states and 23 million acres. Battles would be fought in San Bernardino and Riverside counties in California, Yuma and Mojave counties in Arizona, and Clark County in Nevada. The military used both private and public land.

The military understood that there would be some damage to private land so a few days before the games actually started they set up a claim office at 401 E. Main Street to handle any private claims. They promised to investigate any claims and to pay promptly.

**I think they held to their promise because I didn't find anyone writing into the paper and saying they weren't. But the military did not completely clean up after Desert Strike.**

According to a Park Service report at [http://www.cr.nps.gov/history/online\\_books/moja/adhi2b.htm](http://www.cr.nps.gov/history/online_books/moja/adhi2b.htm) the tracks of the many armored vehicles can still be seen today.

**There is also mention of military debris that still litters the southeast corner of the Mojave preserve and rock alignment remains of camps. Also the military used both Daggett and Silver Lake, in Baker, airports.**

In Barstow, the USO was preparing to entertain soldiers that were passing through. Calls were put out for donations of playing cards, games and paperback books. They hoped to bring in some professional shows but that plan didn't happen. The Chamber of Commerce promised to help. On May 6, the first 30-60 soldiers came through town. The USO provided a place for them to stop over in their travels and take a shower.

Also on May 6 a call was put out for local performers. The date was not given but some time during the war game our USO did put on a show for 500 soldiers. The show was staged on a stage made of two flat bed trucks.

The Master of Ceremonies was Barstow Union High School Senior, Larry Day, who also appeared in a skit with local actress, Marilyn Basford. There were a number of local acts including the band The Night Owls with Angie Becerra. After the show all the soldiers got certificates that inducted them into "The Royal Order of Desert Rats."

To prove that they were true Desert Rats their vehicles got stuck in the sand, and they had to walk back to their camp.

Troops were stationed in many different local areas. Daggett played host to 800 and Ludlow hosted 400-600. Ludlow was the place to be stationed. It was reported that troops there got movies three times a week and beer in the mess hall once a week.

The one place where troops were not stationed was at Fort Irwin. On May 6, it was reported that the base was virtually a ghost town.

The 536th Ordnance Company, the 586th Signal Company, and the 53rd Transportation Company from Fort Irwin all participated in Desert Strike. Along with the locals, the 1st Battalion, 77th Armor and the 4th squadron 12th Cavalry from Fort Carson, Colo., and 1st Squadron of the 4th Cavalry from Fort Riley, Kansas, participated.

Not all the soldiers were fighters. There was a 7,000 man neutral force mainly made up by the 3rd Transportation Company stationed at Ludlow.

The neutral forces were identified by green arm bands. They handled essential services like repairs, fire marshall duties, and air-medical support.

The "war" started on May 11, 1964. The army had prepared an elaborate history of the two sides in the fight. See last week's column for an idea of the thought that went in to the war's history.

As I was researching this story I ran across something interesting. The reports in the paper on the preparation for the mock war were running parallel to reports of casualties in Vietnam. It was almost like the make believe was coming true in real time.

To add to this weird juxtaposition of reality and make believe, at almost the same time details of the "history" of the mock war were released (a fight over water rights) the Secretary of Interior, Stewart L. Udall, was holding hearings in Las Vegas over Colorado River water rights.

Tuesday, July 27, 2004

## **Backward Glance by Steve Smith**

### **More on Desert Strike War Game of 1964**

The Desert Strike War Game of 1964, the largest military exercise since World War II, began on May 11. The first action was an attack on the Davis and Parker Dams on the Colorado River using tanks brought in on pontoon boats.

The game was designed so that the Calonia forces, west of the Colorado River were the good guys and badly outnumbered. The first mock battles did not go well for Calonia.

Barstow started to play a big part in the game at this time. In the fiction that was the game it was thought that the Calonia capitol, Needles, would soon fall.

In case of this, emergency plans were put into place to make Barstow provisional capitol. Major Dan Wilson came to town to set up plans. He met with city government officials Mayor Blendon Beardsley,

City Manager James Tennant, Judge Iva Powell, and Hospital Administrator Albert Koch. Fire and police officials were also consulted to implement a Civil Defense plan.

There was no scrimping on the realism of the battle. The camps were set up with all the power facilities, mess halls and everything else that you would expect to find in any field camp.

Soldiers in the field were also bombarded by shells and even realistic propaganda. Blanks were used and when it was time to determine who was shot or not, there were referees to make the decision. Today we use lasers for the same job. If a soldier was captured, he spent a day in a prison camp and then back to the war on the next day. Makes me wonder how many soldiers got caught on purpose for a possible day off.

May 26 was probably the most spectacular day of the war games. The Calonia forces staged a large airdrop of paratroopers and material behind Nezona forces. The drop was designed to cut the opposing forces from their supply lines. The airdrop may have worked too well. The next day there was an administrative break called and all forces were told to stand down.

The break in activities gave the chance for a bit of fun. The 101st Airborne's Triple Threat band played in town. The Triple Threat was so named because not only were they musicians but also soldiers and paratroopers.

In fact the day before the concerts, the Triple Threat was on guard duty at an undisclosed location. The band marched into Barstow unannounced and then played in four different locations on Main Street.

This caught the locals completely unaware. Then they marched out of town to play small concerts in Daggett, Newberry Springs and Ludlow. Their final concert of the series was at Memorial Day Services in Needles.

Another interesting aspect of these concerts is the uniforms they were wearing in pictures in the Desert Dispatch. The uniforms are the same ones that opposing forces were using in Fort Irwin.

The plain green uniform with an unusual fin across the top of the helmet can be viewed at the 11th Cavalry and National Training Center Museum in Fort Irwin. Call (760) 380-6607 for times and directions to this great museum.

After the one day break, the war games continued. Eventually the Calonia forces dropped mythical atomic bombs on Blythe and Parker, Arizona (Nezona), and on troops in the field.

The game was called a draw on May 30. It was reported that the data collected on the readiness of our troops from the games would take months to compile.

In every war there are stories of great bravery and heroism. The following is not one of those. Near the end of the game John Miller and John Wiley of Palo Verde College in Blythe decide to have a bit of fun. They got some firecrackers and headed out into the desert on a dune buggy (interesting note: dune buggys were so new in 1964 that the Desert Dispatch had to explain what one was).

They found a lonely outpost and lit the firecrackers. "OK, you are surrounded. Throw down your weapons and put your hands up." They shouted and six soldiers surrendered.

Even though it was a game there were injuries and casualties. In all, 12 men died in the preparations of the war games and twenty died during the games.

Troops from cooler climates weren't used to our weather so dehydration was problem. According to some soldiers the real name of Desert Strike was actually "The Long Hot Walk."

There were more serious casualties also. Before the games there was a number of vehicle crashes that took lives. The closest of these was a military vehicle that ran into a train in Daggett. The war games themselves claimed a number of lives.

One danger was drowning in the Colorado River. Not only did soldiers drown during exercises but also during after hours recreation.

This was such a big problem that the military released an order that swimming was to be limited to only marked and supervised swimming areas.

STEVE SMITH

Is vice president of the Mojave River Valley Museum, (760) 256-5452

He can also be contacted at [barstow@verizon.net](mailto:barstow@verizon.net)

# DESERT STRIKE

Out of the clash of arms of the Nezonas and Calonias in free maneuver on the western desert, Strike Command acquired data that will improve the battle posture of the Army and Air Force

By Capt. William V. Kennedy

On 30 May 1964, U. S. Strike Command (STRICOM) completed what may be the most meaningful maneuver conducted in this country since World War II. This was Joint Exercise Desert Strike, with just under 100,000 Army and Air Force participants. The maneuver was spread over 13 million acres of the California-Nevada-Arizona desert.

Only Sage Brush, in 1955, rivaled Desert Strike in scope. Sage Brush was a groping for new concepts in the face of the nuclear challenge. Desert Strike was the first application of all that was learned then, and since, on a scale and with a freedom of maneuver approaching real conflict. The most striking—and, from a training standpoint, the most beneficial—aspect of this maneuver was the ease with which one could grasp the big picture.

Because of the stark nature of the desert terrain and the clarity of the desert atmosphere, the view from any point seemed limitless. Any collector of shoulder insignia, driving his automobile along Routes 66 and 95, could have made out a reasonably complete order of battle. For once, the lowest-ranking soldier in any formation could look out from his tank hatch or down the hill from his foxhole, and see precisely how his

crew or squad, his platoon and his company fitted into the battalion's scheme of maneuver. There were times and places where he could survey the dispositions of his entire brigade.

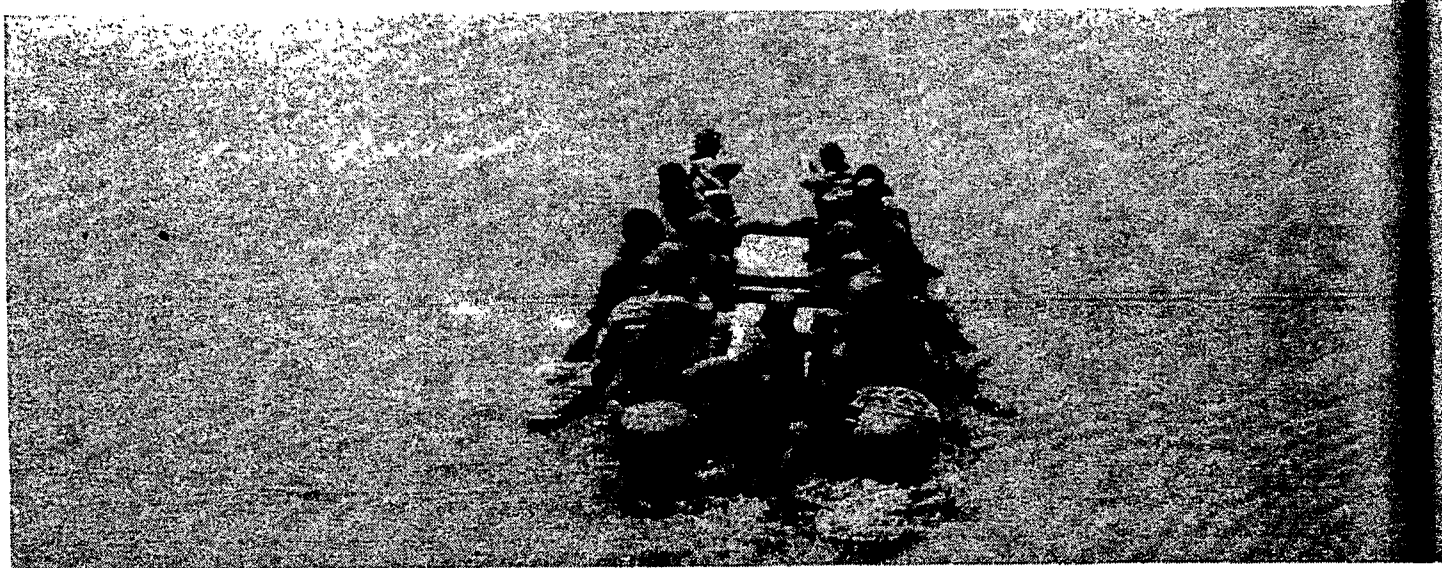
Literally and figuratively, it was a life-size sand table. No more ideal progression from classroom theory to field application could have been devised.

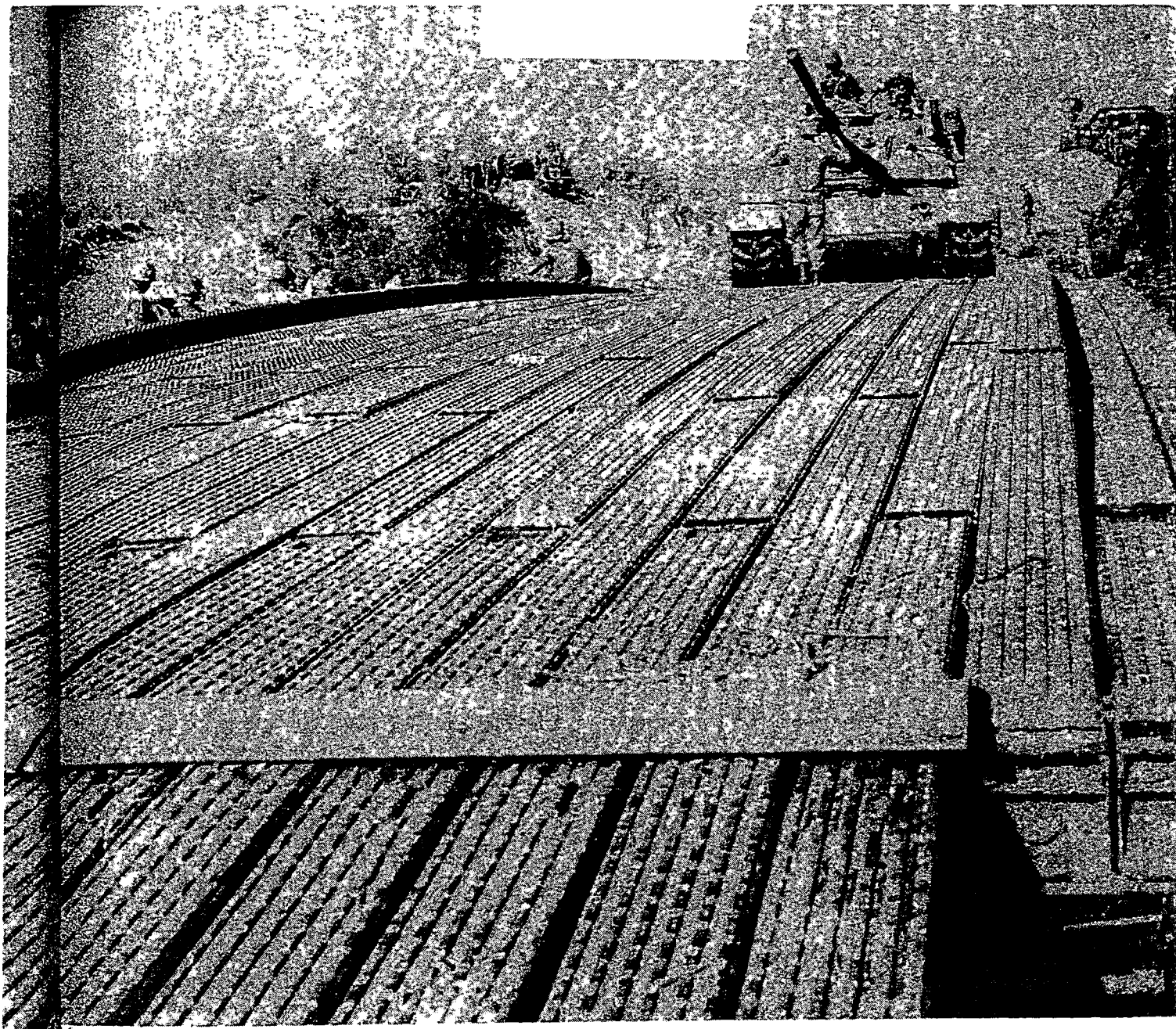
The maneuver area was divided roughly in half by the Colorado River.

West of the Colorado, the 1st Armored Division, with separate cavalry and combat support elements, formed the principal army elements of mythical Calonia. The Calonia forces were top-heavy in command, initially, with Headquarters XVIII Airborne Corps sandwiched between the 1st Armored Division and Joint Task Force Mojave, the headquarters of Lt. Gen. Charles B. Westover, who was in effect the theater commander. The role of XVIII Airborne Corps was that of Headquarters Army Forces Mojave.

General Westover, normally vice commander of Tactical Air Command (TAC), took his orders from a three-man government established in a rented house trailer on neutral ground at Maneuver Director Headquarters at Needles, Calif., in the ap-

*This is an easier way to get across than swimming, but harder than crossing on a ponton as the tank (opposite page) seems to be thinking of doing. . . . Now if a man had a helicopter there would be nothing to*





proximate center of the maneuver area.

JTF Mojave itself was built around one of the two joint task force headquarters STRICOM maintains for deployment to overseas crisis areas. These headquarters are made tactically viable by attaching forces from Continental Army Command and Tactical Air Command. The same procedure was followed in Desert Strike.

The second of the two STRICOM emergency deployment headquarters controlled the military forces of Nezona, mythical government of the maneuver area east of the Colorado, in Nevada and Arizona. This was Joint Task Force Phoenix, commanded by Lt. Gen. Charles G. Dodge, CG, Fifth Army.

Army Forces Phoenix were organized under III Corps. Principal elements were, from north to south along the river: 5th Infantry Division (Mechanized), less one brigade; the four-battal-

ion 258th Infantry Brigade, Arizona Army National Guard; 191st Infantry Brigade, USAR, of Arizona-Utah-Montana, with one reinforced infantry battalion; and 2d Armored Division.

With extensive attached combat support elements, JTF Phoenix possessed an initial advantage of three to one over its opponent, in land combat power.

For simplicity of communications and support, the Nezona government also was located at Needles.

Each government had a prime minister, a foreign minister, and a defense minister. The prime ministers and defense ministers were distinguished retired officers. The foreign ministers were supplied by the State Department.

Air Force Forces Mojave and Air Force Forces Phoenix were supplied by the Ninth and Twelfth Tactical Air Forces, reinforced by three compo



site fighter squadrons of the Air National Guard, with extensive Air Guard ground controller participation.

Air National Guard and Air Force Reserve transport squadrons participated extensively in the airlift of troops and equipment to and from the maneuver area.

TAC elements, including the Guard squadrons, totaled 238 jet combat aircraft, deployed on 29 bases in California, Arizona, Nevada, New Mexico, and Texas. One hundred C-130 aircraft were available for airlift.

Regular and National Guard elements of North American Air Defense Command, including Army Air Defense Command Nike batteries, were available, and were employed, to assist in the battles for air supremacy.

Held initially in "maneuver director reserve" were: the 101st Airborne Division; the 2d Brigade, 40th Armored Division, California Army National Guard; the 2d Battalion, 34th Armor, of the permanent garrison of Fort Irwin, Calif.; four tactical air squadrons and five troop-carrier squadrons.

#### A really "free" maneuver

Desert Strike was a "free maneuver," all tactical options being delegated to the two joint task force commanders.

The maneuver director reserve forces thus were one of the few means Gen. Paul D. Adams, Commander in Chief, U. S. Strike Command, and Desert Strike maneuver director, reserved to himself to influence the tactical play.

There was no scenario.

On Saturday, 16 May, Mojave forces seized Davis and Parker dams to forestall apparent Nezona intentions to preempt Colorado River water rights. Nezona declared war.

#### A river difficult to cross . . .

At 2100 hours, 17 May, JTF Phoenix launched an assault along a front of 140 river miles. All existing bridges were ruled destroyed by retreating Mojave forces. The dams were simply ruled out of bounds.

Seven tactical crossing sites were chosen, each two to three miles wide. At four of these sites—two in each division's sector—military bridges were to be emplaced.

The Colorado and the lakes formed behind its dams present a difficult crossing problem. The lakes are wide and deep. Elsewhere, the river is swift enough to knock a man off his feet. The 5th Division, and the 258th and 191st Infantry Brigades, got their advance elements across mainly by assault boat.

An enterprising representative of the 2d Armored Division talked the dam operator at Parker

Dam into holding back the water flow long enough to permit tank fording along the river just south of the dam. Two battalions of M60s were forded by this means. But when normal water flow was restored, the resulting fluctuations in river velocity and depth played hob with all subsequent 2d Armored rafting and bridging.

"This was just one small taste," Colonel Robert E. Mathe, Engineer Officer, J4, Maneuver Director headquarters, commented, "of what could happen if an enemy controlled an upstream dam."

Armored personnel carriers replaced boats for assault infantry crossings in the 2d Armored Division's sector. Despite the adverse conditions produced by the dam flow manipulations, this proved highly successful.

"It should be pointed out here," Colonel Mathe noted, "that 'swim' crossings by amphibious armored vehicles do not totally eliminate the engineer effort, and in crossings by the 2d Armored, the divisional engineers were used to build approaches to and from the shore line, to mark specific 'swim' lanes, and to direct 'swim' traffic while crossing."

Light tactical rafts were in operation before dawn of 18 May. M4T6 rafts were in business later in the morning.

In the Lake Mojave area, the 5th Mechanized Division, supported by the 1457th Engineer Battalion, Utah Army National Guard, conducted what General Adams later described as "one of the finest operations I have seen anywhere, in war or in peace."

#### . . . and a skillful crossing

By a skillful combination of crossing site, march and crossing control, and efficient rafting operations, the 5th brought its units to the water along a concealed approach, moved them across smoothly, and exited by another concealed route. "They came from nowhere and then disappeared into nowhere," General Adams said.

Only two bridges of the four planned were completed in the initial crossing phase. A third bridge was not completed until 2000 hours, 19 May. The fourth was abandoned because of a combination of severe terrain, air attacks, manipulation of the dam flow, and a shortage of bridging materials.

The bridging experience seems to make plain that divisional engineers, as now organized and supplied and what, up to now, have been considered normal supporting engineer elements, are insufficient for conducting a crossing on so broad a front. Available engineer units, Colonel Mathe noted, "were overextended in this operation and thus tired badly as they carried out successive tasks."

Neither Nezona nor Calonia had, as yet, resorted to the use of nuclear weapons. Both gov-



*Give a man an open field of fire, a good position and plenty of ammunition and the hordes may proceed at their own risk*



ernments were proclaiming their reluctance to do so. The local civilians were fast at catching on to the psychological warfare this created, with newspapers, radio stations, mayors and even Boy Scout troops on both sides of the Colorado joining in the hue and cry on the part of their respective "country."

After crossing the river, the 5th Mechanized Division was slowed by difficult terrain, and largely contained by a defending task force consisting of the cavalry squadrons of the 1st and 4th Infantry Divisions, an airborne infantry battalion, and an armored field artillery battalion, under the command of Brig. Gen. Robert R. Linvill, deputy commander of XVIII Airborne Corps.

A somewhat deeper penetration was made into the desert west of Needles by the 258th Infantry Brigade.

In contrast to the difficult terrain of the 5th Division's sector, the 2d Armored Division had crossed onto a broad agricultural plain. This rose to a wide avenue—principally the Cadiz Valley—beginning at Vidal Junction and sweeping west and northwest to Fort Irwin, through the heart of the Calonia defense.

### You cross to strike the enemy

The extended front, and the prohibition against use of nuclear weapons made it impossible for the 1st Armored Division to conduct a true mobile defense. Instead of the tank-heavy striking force called for by the mobile defense concept, this division, and JTF Mojave as a whole, were left with a reserve brigade of two battalions.

After a delay imposed to a considerable extent by channelization of movement through crop lands of the Mojave Indians, the 2d Armored Division launched a major attack on the night of 19-20 May.

The 1st Armored Division was forced to commit its weak reserve brigade immediately. Dawn revealed a 75-mile penetration by a brigade-size force of the 2d Armored, enveloping the reserve brigade and the entire Mojave right flank.

General Westover requested authority to employ nuclear weapons, as soon as the extent of the threat became apparent. While awaiting word from the Calonia government, Mojave was left with one last reserve of mobile mass firepower—its air striking force.

### Responsive air support

Mojave had begun the war with a disadvantage of four tactical fighter squadrons to Phoenix's six. The opposing air forces had been engaged, so far, chiefly in a struggle for air supremacy. Now, over 50 per cent of the Mojave air strength was massed against the brigade of the 2d Armored enveloping the right flank. At one time,

this enveloping force was under attack by no less than 37 fighter aircraft, directed by a helicopter-borne tactical air control party.

One squadron of 12 fighters was attacking 2d Armored tanks, from a distant West Coast base, within 15 minutes after General Westover called for it. The fighters were given almost limitless staying power in the target area by Strategic Air Command KC-135 tankers maintaining station at altitude, with Air Defense Command fighters flying top cover.

One fighter, operating from Biggs AFB at El Paso, remained airborne by this means for 6 hours 20 minutes. Over eight million pounds of jet fuel were transferred during the course of more than 1,300 Desert Strike air-to-air refuelings. At no time were opposing fighters able to "destroy" enough tanks to make them ineffective.

Had it been necessary to continue the attack into the night, a newly developed tactic—Night Owl—employing high-powered, fighter-dropped flares would have made possible continuance of the air-to-ground operations indefinitely. This, too, was tested at Desert Strike, and it works.

### Use of tactical nuclear weapons

Permission to employ nuclear weapons was granted by the Calonia cabinet at 1504 hours, 20 May, within about seven hours of General Westover's request. An Army nuclear strike delivered by Honest John was launched immediately against the 2d Brigade, 2d Armored Division, attacking the reserve brigade of the 1st Armored Division. The 2d Brigade, 2d Armored, shattered, was withdrawn 25 miles on order of the maneuver director.

The damage inflicted by the fighters on the flanking brigade of the 2d Armored to the south was not immediately assessed because the umpires and their jeeps became bogged down in the dust, some distance to the rear. But there could scarcely be any question that the envelopment had at least been given pause.

Cavalry elements of the 2d Armored and 5th Mechanized established contact at this point, setting up a coordinated Nezona front west of the river.

The 3d Brigade, 2d Armored Division, remained largely intact. It had made a 90-degree turn early in the day, slicing into the Mojave rear area and threatening to roll up the task force defending against the 5th Division and the 258th Brigade in the north.

All the rest of the 101st Airborne Division, the 2d Brigade of the 40th Armored Division, the 2d Battalion of the 34th Armor, five troop-carrier squadrons and an additional tactical fighter squadron were released to Mojave about 1400 hours, in the midst of a swirling, dust-shrouded melee.

The 40th Division units were committed piecemeal as they arrived from Fort Irwin. The 101st could not be tactically employed in time to redress any part of the situation. The additional fighter squadron was scarcely enough to equalize the air battle, much less win it.

Concerning battlefield use of tactical nuclear weapons at this point in the action, the words of an official account are significant: "Because of the intermingling of ground troops and the continuously changing tactical situation, Commander, Joint Task Force Mojave, had difficulty in pinpointing ground targets in the immediate battle area."

### Mojave faces collapse

By noon on D plus 5 (Friday, 22 May), despite a massive nuclear assault by Air Force Forces Mojave against Phoenix rear ground targets and air bases, Mojave was confronted with total collapse. A 24-hour administrative break was called so as to prevent the war from ending then and there.

The nuclear pause concept had been tested in a political situation, and in the context of a power ratio that may not be too dissimilar to that which exists in Europe.

The attacking force was free to choose its major points of attack. It was free to mass, and to conduct the most crucial phase of the attack—the river crossing—free from nuclear opposition.

The request for use of nuclear weapons was delayed until the commander on the ground had a clear and convincing case.

Communications between the tactical commander and his government were ideal. It took only seven hours for the situation to be assessed and permission granted. That was seven hours too late.

By means of a time-phased regeneration of losses, both Mojave and Phoenix were reconstituted during the administrative break, or some time thereafter. A question arises as to where these individual and unit replacements were to come from.

Tactical air losses during the maneuver would have equalled 300 per cent of the initial airpower committed.

The entire 1st Armored Division, certainly, and a third or more of the 2d Armored Division, would have had to be replaced. An entire brigade of the 101st Airborne Division was ruled destroyed by a nuclear strike while boarding aircraft.

All this in one week of combat in one 140-mile sector of a limited war.

Desert Strike's tactical action was resumed at 1200 hours, 23 May.

The release of almost the entire maneuver director reserve to Calonia had not been sufficient

to stave off collapse when break-up already had commenced. Surprisingly, release of the entire reserve to Calonia, including the last four tactical fighter squadrons, was not sufficient to restore the original tactical situation.

### Armor versus airborne

The 258th and 191st Brigades were withdrawn at the expiration of their field training period. This reduced the 5th Division to two brigades and extended the ground the 2d Armored Division was required to cover from its own resources. As a result, the 5th was forced to begin a withdrawal across the Colorado under pressure from the 101st Airborne Division and the 2d Brigade, 40th Armored. Two battalions of the 101st, with their equipment, were airdropped from 67 C-130 aircraft at dawn, 25 May, in an attempt to trap the 5th west of the river.

Lead elements of the 2d Brigade of the 40th, supporting the operation as the armor link-up force, reached the drop zone ahead of the paratroopers. This, in turn, drew armor and mechanized elements of the 5th into the area. The airdrop would have been made into the middle of a full-scale tank and mechanized infantry battle.

The 5th withdrew to the east bank successfully, and recrossed immediately toward the south in support of the 2d Armored Division. With this reinforcement, JTF Phoenix still was fighting west of the Colorado when the maneuver ended at 1700 hours, 29 May, after a second 36-hour break.

Although obscured by the tactical play, an experiment conducted at Desert Strike produced meaningful results in regard to control of widely deployed task forces, such as those on opposing sides in the desert.

Operating through the Syncom II satellite and an Army Satellite Communications Agency ground unit at Needles and Camp Roberts, Calif., Brig. Gen. Robert W. Paulson, USAF, STRICOM J6 (Communications and Electronics), was able to maintain continuous, secure voice and teletype service throughout the maneuver between Needles and STRICOM headquarters at MacDill AFB, Fla.

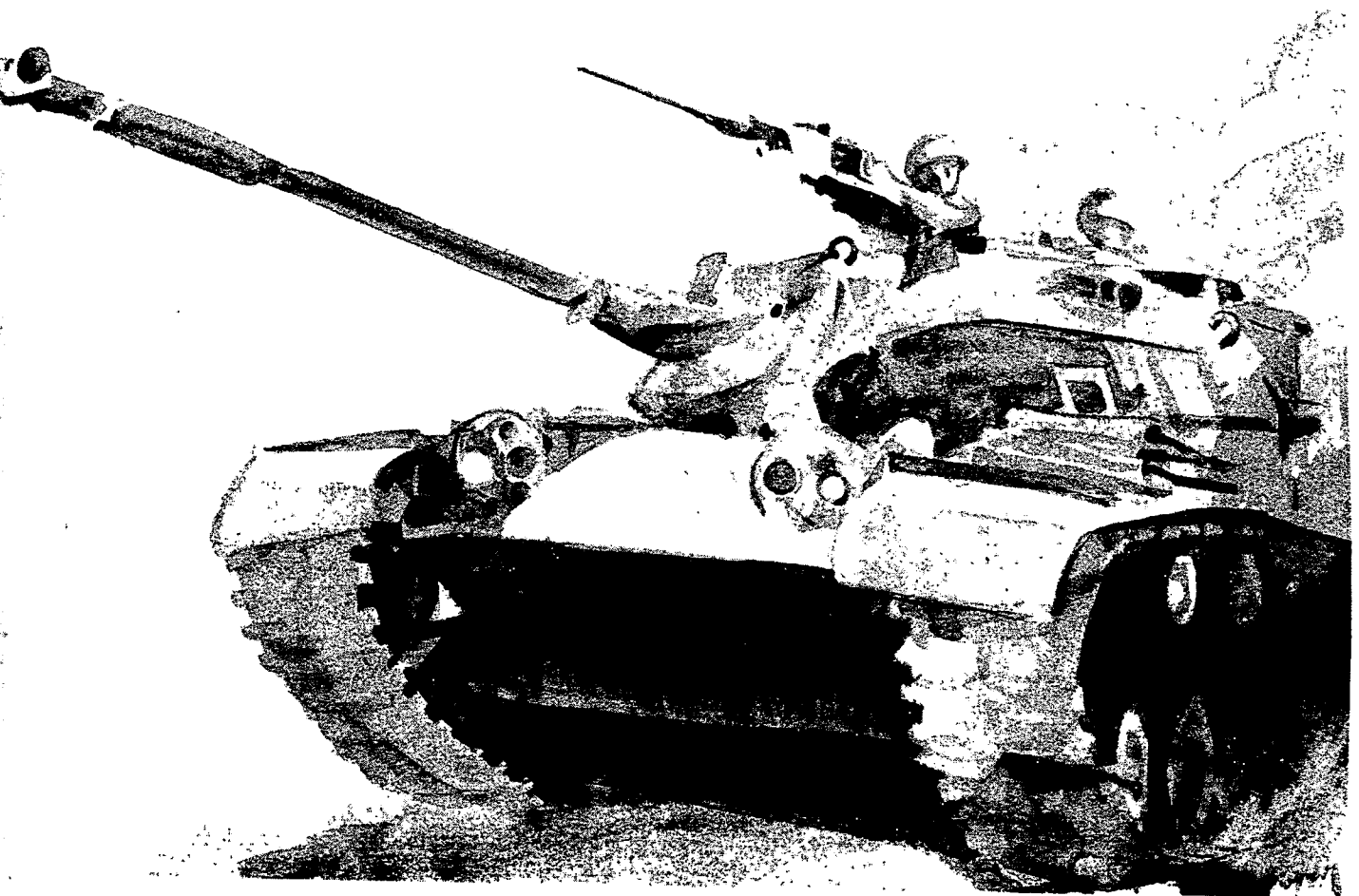
"STRICOM is convinced," General Adams stated, "of the performance potential and the economic advantages of this system for long-haul tactical communications. We are hopeful that the success of the experiments in Desert Strike will lead to the designation of a Syncom satellite for use by STRICOM in the huge African-Middle Eastern-South Asia potential area of operations."

As is apparent even from this short, preliminary examination, Desert Strike is just what General Adams said it was at the conclusion of the exercise: a gold mine of information.

# EXERCISE DESERT STRIKE

## Concept and Operations

AN AIR UNIVERSITY REVIEW STAFF REPORT\*

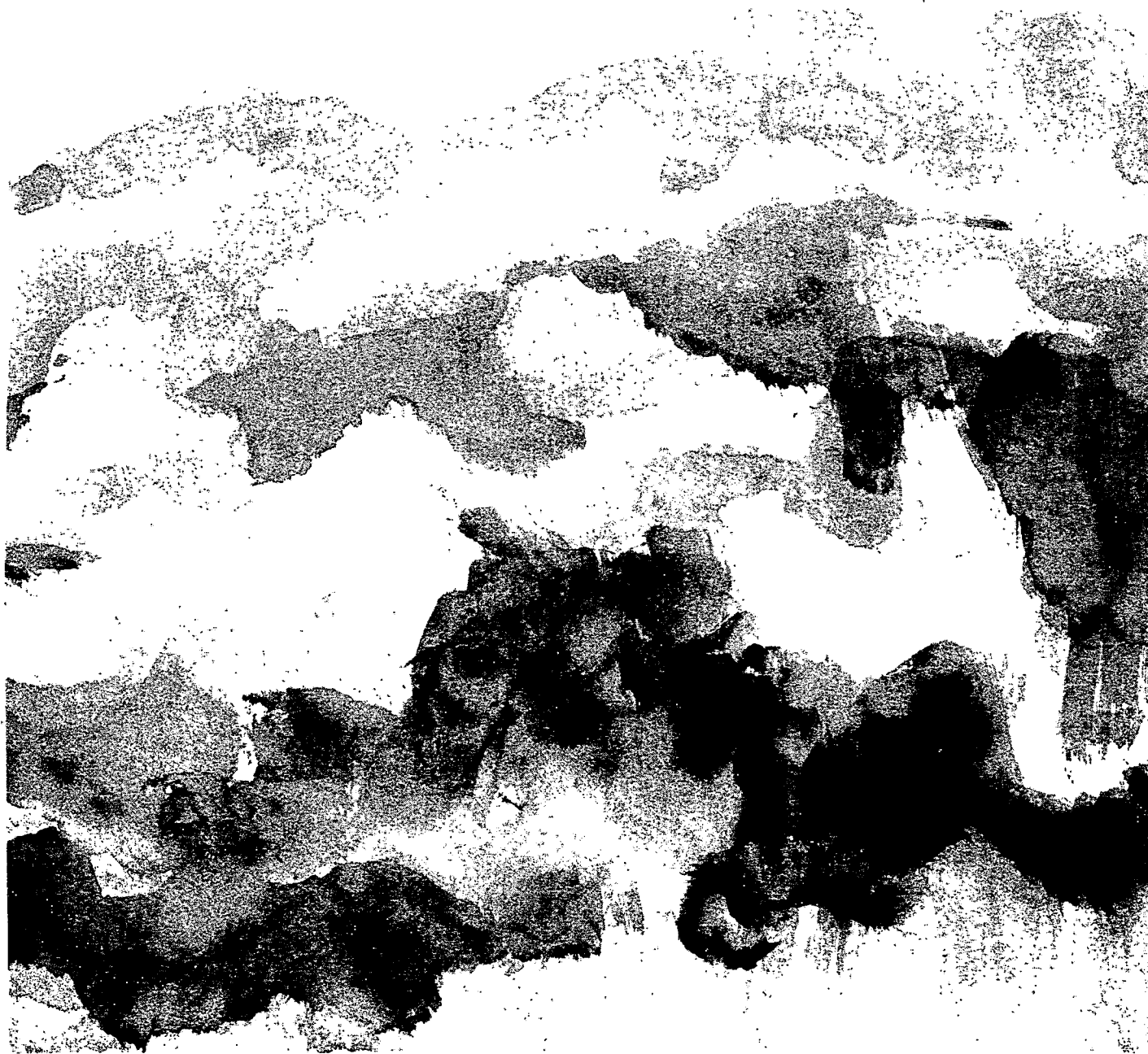


**T**HE LARGEST United States military training exercise since World War II was conducted in May 1964 by the U.S. Strike Command in adjoining areas of California, Arizona, and Nevada. It was also the first armored exercise held in the United States since World War II. Two joint task forces with a total of over 100,000 personnel of the U.S. Air Force and Army, over 900 aircraft, and more than 500 tanks battled for nearly two weeks on a ground maneuver area of some 13 million acres in the desert region of southwestern

\*The Editor wishes to acknowledge his indebtedness to Lieutenant Colonel Edward B. Vogel, USA, Directorate of Operations (J-3), Hq USSTRICOM, who assisted in the preparation of the report.

United States. As in past joint exercises, tactical nuclear weapons training was conducted during the play of the exercise.

Appropriately called Desert Strike, the air maneuver area covered three quarters of a million square miles, with aircraft operating from 28 widely dispersed air bases extending from the State of Washington through Texas. Incidentally this desert was also the setting for the last training exercises for armored units of such mammoth proportions—in 1942-43—when it became known as “General Patton’s Training Center” during extensive ground maneuvers there. The Desert Strike ground maneuver area extended from Barstow, California, just



east of Edwards Air Force Base, eastward 170 miles to Kingman, Arizona, and from a point approximately 40 miles south of Las Vegas, Nevada, southward 160 miles to Blythe, California. This area, consisting primarily of portions of the Mojave Desert and the irrigated lands along the Colorado River, was typical of desert terrain, with extreme differences in elevation, varying from large flat expanses of sandy desert floor to jagged, rough mountain ranges.

Desert Strike was a semicontrolled exercise under the direction of U.S. Strike Command that allowed opposing joint task forces, comprised primarily of armored and mechanized forces with full air support but including airborne units, a maximum of "free play" initiative to develop, perfect, and test combat techniques and tactics. Command control was exercised only when necessary to ensure meeting objectives of the maneuver. "Training in modern warfare for our combat-ready Army and Air Force units requires the use of land areas many times larger than areas of even the largest military reservations," said General Paul D. Adams, Commander in Chief, USSTRICOM, and Exercise Director. The maneuver area was selected primarily because the desert terrain is suitable for large-scale tank movement and because of its relatively sparse population. The dispersal of Air Force units over distances similar to those expected in actual combat, together with the freedom of action which was given the JTF commanders in their employment of ground and air units, ensured a realistic no-set-pattern course of combat maneuvers typical of USSTRICOM exercises. Emphasis was placed on allowing Air Force commanders the maximum amount of flexibility in selecting bases for their fighter, reconnaissance, and troop-carrier squadrons. The initial planning objective was to obtain  $1\frac{1}{2}$  air bases per fighter squadron involved in the exercise, which would allow the Air Force commander the flexibility of moving squadrons from one base to another or dispersing squadrons or parts of a squadron among different bases. This flexibility also permitted the Air Force commander to use close-in air bases, near the ground maneuver area, as forward

operating bases. As a result of this emphasis and guidance, the air bases acquired for exercise play included not only Tactical Air Command bases but other Air Force bases, Navy and Marine air bases, and civilian airfields.

Lieutenant General Charles G. Dodge, Commanding General, Fifth U.S. Army, commanded Joint Task Force Phoenix. His deputy was Air Force Major General Clyde Box, Director of Plans, USSTRICOM. JTF Phoenix defended the mythical country of Nezona, generally east of the Colorado River, beginning at a point southeast of Salome, Arizona, extending north of Kingman, Arizona, through the southern tip of Nevada, and back to the Colorado River.

Lieutenant General Charles B. Westover, Vice Commander, Tactical Air Command, commanded the opposing Joint Task Force Mojave of the mythical country of Calonia. His deputy was Army Major General Charles H. Chase, Special Assistant to the Commander in Chief, USSTRICOM. JTF Mojave conducted land operations in the Mojave Desert area west of the Colorado River, the northern boundary running from the river west to Fort Irwin, California, southeast to Blythe, California, then back to the river.

Major General John C. Meyer, Commander, Twelfth Air Force (TAC), at Waco, Texas, was designated as Chief Controller (Umpire). He formed his umpire planning group at Luke AFB, Arizona, on 24 February. This group had the mission to determine exactly how Joint Exercise Desert Strike would be umpired, the command and control procedures to be used in umpiring the exercise, and to prepare and publish an umpire handbook.

The Director Headquarters and Headquarters Neutral Forces were established at Needles, California. This location permitted both these headquarters to be centrally located within the ground maneuver area and was adjacent to a town with adequate accommodations for the observers expected during the exercise.

All commanders were briefed by General Adams and his staff over a two-day period on the background and purpose of Exercise Desert Strike, the command and control to be

used in the exercise, and all the necessary background material to permit them to form their staffs and develop their initial plans.

The General Plan for Desert Strike, published on 25 March, was a directive providing necessary information for deploying forces to the exercise area and outlining the rules of the exercise and plans for redeployment of forces. This was not a tactical operations plan. It was very general in providing commanders and supporting forces with a background political/military situation to set the stage for the exercise but included no tactical information. Each commander also received his operational missions from the Exercise Director. These were contained in separate contingency-type plans presented to each commander, which provided him with specific military and political information and details, including his task organization, overall tactical mission, and the concept of operations.

The command structure of Exercise Desert Strike consisted of three principal forces: Joint Task Force Mojave, Joint Task Force Phoenix, and the Director Reserve. JTF Mojave initially consisted of the following units:

Headquarters, XVIII Airborne Corps

- 1st Armored Division
- 5th Logistical Command

Headquarters, Ninth Air Force

- 4 fighter squadrons
- 1 composite reconnaissance squadron
- 1 troop-carrier squadron (C-130)
- 18 Air Defense Command aircraft
- 10 refueling aircraft (Strategic Air Command).

JTF Phoenix consisted of the following units:

Headquarters, III Corps

- 2d Armored Division
- 5th Infantry Division (Mechanized)
- 258th Infantry Brigade (Arizona)  
(Army National Guard)
- 191st Infantry Brigade (Arizona,  
Montana, Utah) (Army Reserve)
- 1st Logistical Command

Headquarters, Twelfth Air Force

- 6 fighter squadrons
- 1 composite reconnaissance squadron
- 1 troop-carrier squadron (C-130)
- 18 Air Defense Command aircraft
- 10 refueling aircraft (Strategic Air Command).

In addition to the two opposing Joint Task Forces, a third force called the Director Reserve was also established. This Director Reserve was to simulate a strategic or a theater reserve that might be moved from continental United States or from strategic staging bases to the forward combat area. It was planned that all the Director Reserve forces would be initially located within the Mojave territory and that on a scheduled basis these units would be attached to Joint Task Force Mojave. The Director Reserve initially consisted of the following units:

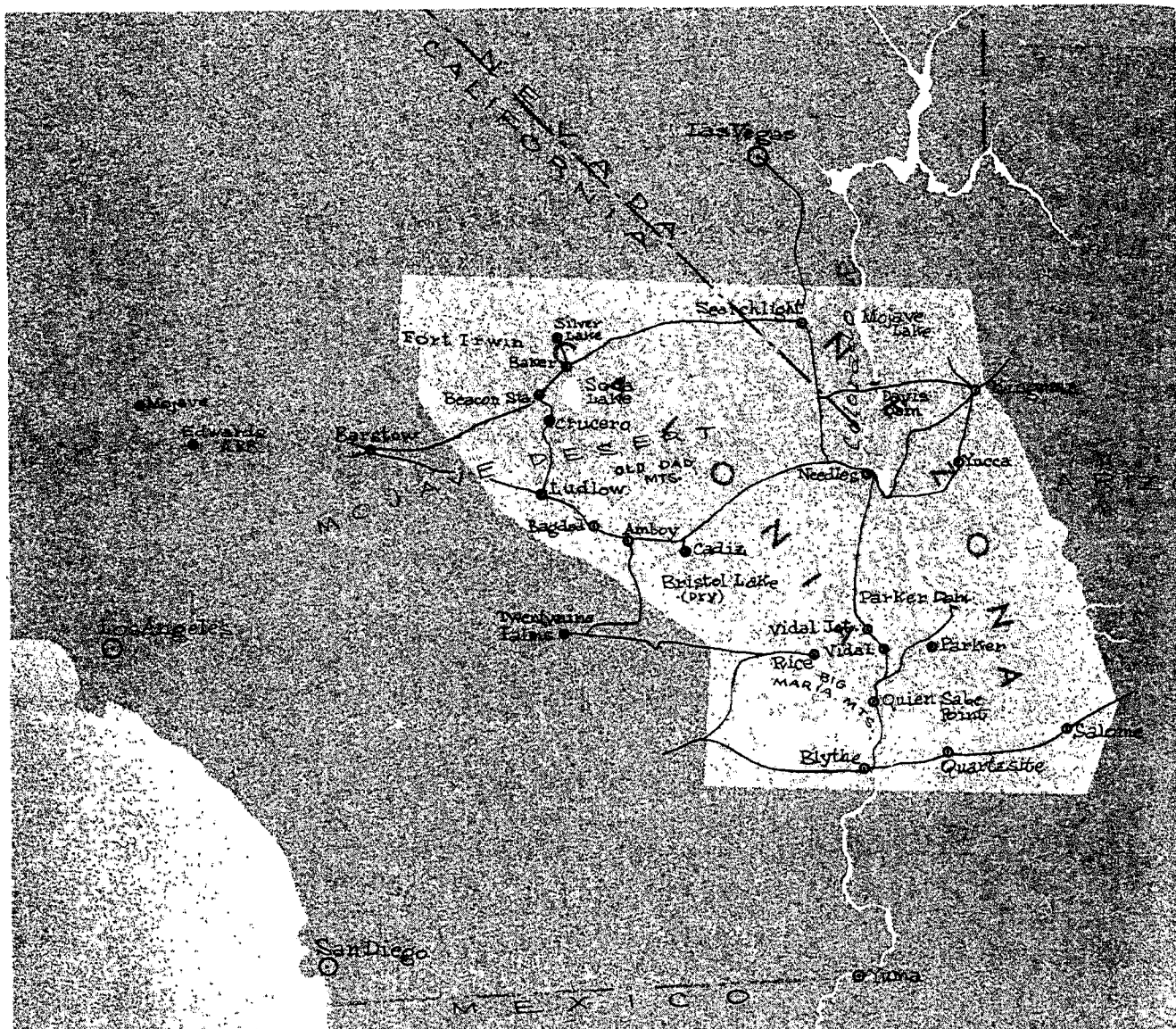
- 101st Airborne Division
- 2d Battalion, 34th Armored  
Division
- 2d Brigade, 40th Armored Division  
(California National Guard)
- 6 fighter squadrons
- 6 troop-carrier squadrons.

For the first time in a large-scale USSTRICOM joint exercise, major reserve component Army and Air Force units were involved. Air Force reserve component units included three provisional fighter squadrons and major elements of the 152d and 157th Aircraft Control and Warning Wings. Army reserve component units consisted of three brigade-size units and a number of combat and combat support battalions.

The 101st Airborne Division, a part of the Director Reserve, was initially deployed by the Military Air Transport Service to intermediate staging bases at Mojave-Kern Airfield, California, a civilian airfield approximately 20 miles west of Edwards AFB, California, and to Point Mugu and El Toro Naval Air Stations, California.

By 20 April the initial elements of the player units moved into the ground maneuver area. They consisted primarily of advance par-

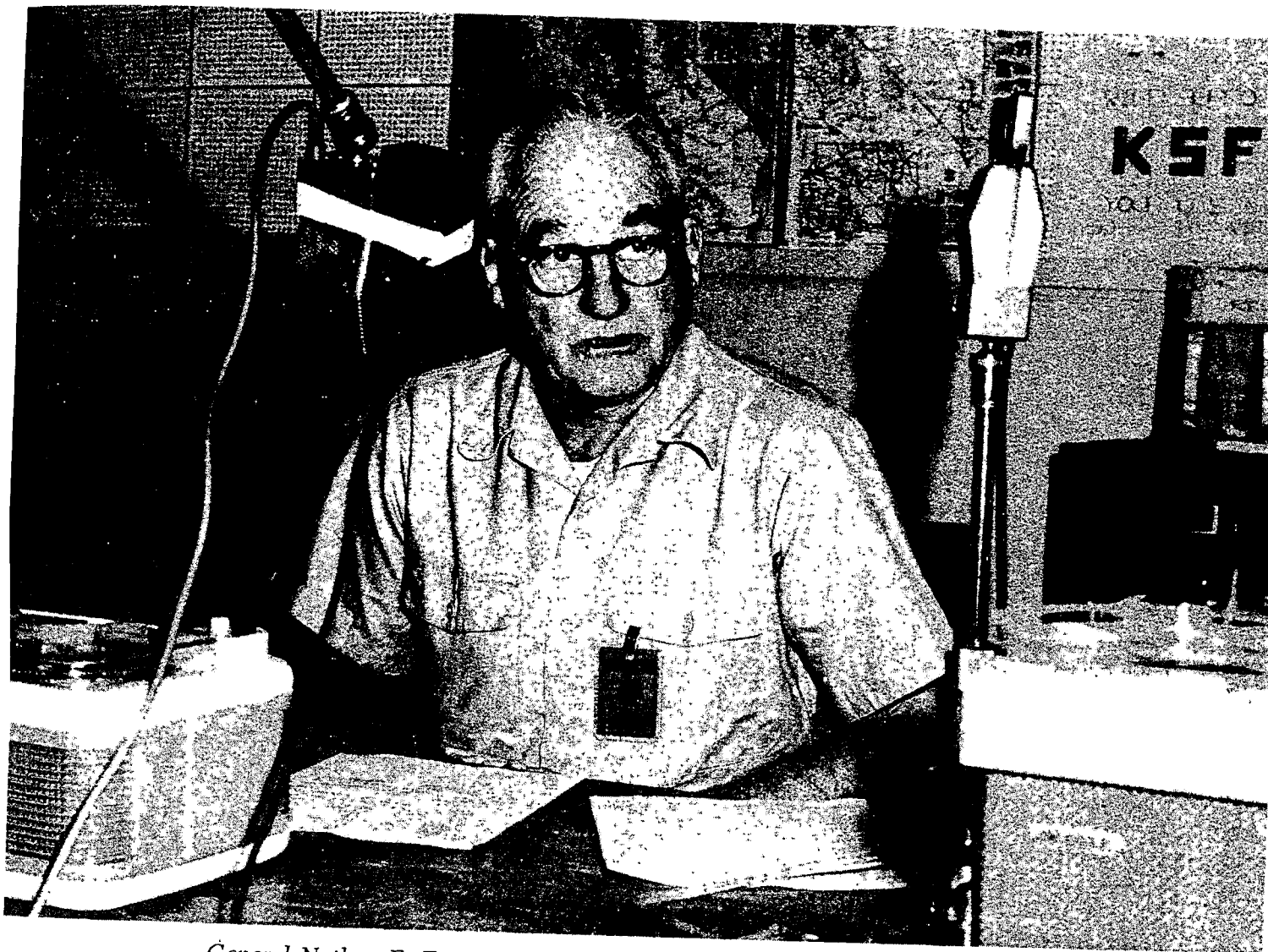




*In May of 1964, a 22,000-square-mile slash of southwestern desert (light area) was the battleground for U.S. Strike Command's Joint Exercise Desert Strike.*

ties of administrative and logistical support units required to meet loaded trains and vehicle convoys. Air Force radar installations and ground support units commenced moving to the ground maneuver area and to the air maneuver bases early in May. The Director Headquarters became operational at Needles on 9 May.

The political situation that gave the exercise realism and brought about the "war" was a dispute between the mythical countries of Nezona and Calonia over Colorado River water rights. Also Calonia's State of Mojave on the west of the Colorado River had belonged to Nezona before World War I, and Nezona felt justified in attempting to reoccupy

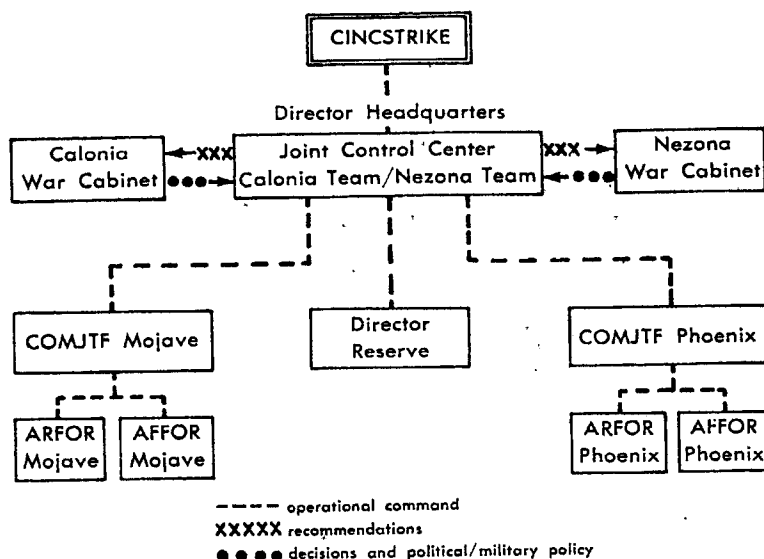


*General Nathan F. Twining, USAF Ret., in his role as Prime Minister of Calonia, announces a state of war between his country and Nezona.*

Mojave to ensure her control of the river. The Organization of Western States had attempted, unsuccessfully, for ten years to settle the dispute between Nezona and Calonia. The exercise began shortly after Nezona threatened to seize the Parker and Davis Dams, on the Colorado River, and the eastern part of the State of Mojave. The seriousness displayed by the planners and participants of the exercise and the efforts to make the background a realistic political-economic-military situation were in-

dicated by the selection of personnel as participants in this phase of the play. General Nathan F. Twining, USAF Retired, former Chairman, Joint Chiefs of Staff, was the Prime Minister of the mythical country of Calonia. General Jacob L. Devers, USA Retired, former Commander, Army Field Forces, was the Prime Minister of Nezona. The war cabinet of each of these political leaders was made up of retired and former high-ranking military and political leaders. Each held war cabinet





*The War Cabinets of Colonia and Nezona were each the equivalent of a National Security Council. The Joint Control Center was the equivalent of a Joint Chiefs of Staff organization. The government of Colonia had General Nathan F. Twining, USAF Retired, as Prime Minister, and General Clyde Davis Eddleman, USA Retired, as Defense Minister. The government of Nezona had General Jacob L. Devers, USA Retired, as Prime Minister, and Lieutenant General Ira C. Eaker, USAF Retired, as Defense Minister.*

meetings twice daily to go over the war situation, issue political statements, and make suggestions.

The Joint Control Center (jcc) at Director Headquarters had integrated Mojave and Phoenix Operations and Intelligence Teams, which paralleled the responsibility of our own Joint Chiefs of Staff. Tactical situations requiring national-level decisions were presented to the appropriate War Cabinet. In turn, direction and decisions issued by the War Cabinets were implemented by the jcc organization through operations orders and frag orders to the joint task forces.

Both these countries were depicted as having a democratic form of government with a president, prime minister, foreign minister, and minister of defense. Nezona's government, however, was portrayed as being very unstable, with the Conservative Party initially in power. On 12 May the president of Nezona announced the formation of a new govern-

ment composed primarily of National Progressives, the opposition party, who had been agitating to regain the State of Mojave. At 1400 hours 15 May diplomatic relations were severed between the countries of Nezona and Colonia. Late on the same afternoon the Organization of Western States indicated that it was withdrawing from the demilitarized zone. As a result, early on 16 May Joint Task Force Mojave was ordered to seize, secure, and simulate operation of the Parker and Davis Dams. The dams were seized by company-size units at 0500 of the same day. Tactical air forces were restricted from violating the boundaries with either combat or reconnaissance aircraft prior to the actual initiation of hostilities. Colonia's action in seizing the Parker and Davis Dams sparked offensive action by JTF Phoenix, the opposing military force. On 16 May Nezona declared war against Colonia and issued orders to JTF Phoenix to conduct offensive actions to seize the State of Mojave.

## The Desert Strike Campaign

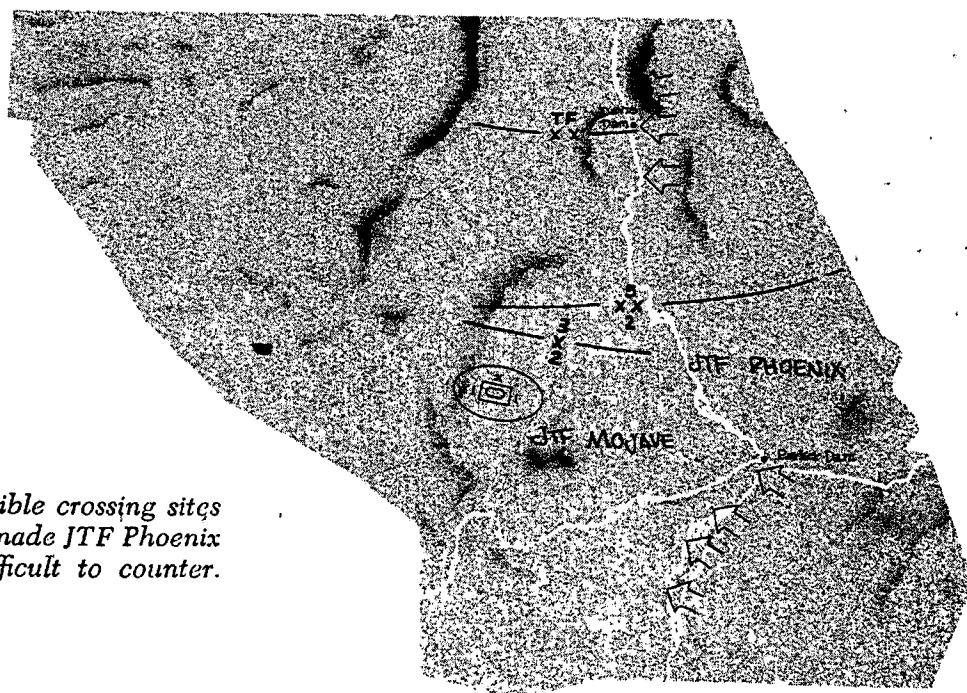
Major activities got under way in the exercise on 18 May (D+1) as JTF Phoenix's 2d Armored Division ("Hell on Wheels") of World War II fame began to move across the Colorado River below Parker Dam. The non-nuclear attack with all brigades on line and only battalion-size reserves began in the early evening of the 17th so as to avoid visual detection by reconnaissance flights of JTF Mojave (Map 1).

### *initial offensive*

JTF Mojave, faced with two-to-one odds, deployed its units in a mobile defense, with the intention of maintaining dispersion but at the same time being prepared to mass quickly to eliminate bridgeheads. The Phoenix tactics of crossing at many points made this plan of defense difficult to implement, in that the defenders had to decide quickly which crossing to block or delay and which to counterattack. Phoenix made maximum-effort attacks with simulated nuclear weapons against Mojave

airfields which were so successful that on the morning of 18 May (D+1) Mojave had no available aircraft for close air support or counterair missions. As a result, by 1700 hours on D+1 (20 hours after the initial attack) JTF Phoenix had completed three pontoon bridges and was moving the bulk of its heavy armor and support units over the river. The crossing was completed successfully through the efforts of the 17th Engineers of the 2d Armored Division from Fort Hood, Texas, in setting up a pontoon bridge. Through the first night some 964 pieces of assorted battle equipment moved in a steady stream across this structure. Only once, at 0830 the next morning, was the crossing interrupted, and then only briefly when two low-flying F-84F's of JTF Mojave attacked and the umpires on the scene declared the bridge out of action for two hours.

The pontoon bridge was a series of rubber boats supporting corrugated-steel planking anchored securely to both banks of the free-flowing river. One of the tricks in this particular crossing was to make sure that all activities occurred at a time when the gates of the massive Parker Dam to the north were closed and



Map 1. Inaccessible crossing sites on a wide front made JTF Phoenix night attack difficult to counter.

the level of the river was constant. The rise and fall of the Colorado, with its dams, and the swiftness of its flow could play havoc with a crossing.

As elements of the 2d Armored Division got across the bridge, they picked up speed immediately and fanned out on roads and on trails into the desert country in their determined drive westward to occupy Calonian territory. Their immediate objective was not disclosed, but as they fanned out in the desert with armored columns in the direction of Rice and Vidal Junction they encountered only sporadic slash-and-run resistance. The Mojave forces fell back in the face of the headlong frontal assault. The extreme caution observed by the forces of JTF Phoenix was indicated by one of the officers of 2d Armored Division's G-3 staff: "Probably the enemy will pick their place to stand and fight. We have to be careful to keep our lines of communication open and not get taken by surprise. We are continuing reconnaissance by both air and ground to ensure that we know where our enemy is at all times and to preclude getting encircled by the Mojave forces." Some of the elements of the 2d Division ranged as far as 35 miles west, near Rice. Their scouting parties continued to probe and push the Mojave forces in an effort to open gaps in their defenses for advances by the main body of the deploying Phoenix forces.

Strong armored and mechanized forces of Phoenix's 5th Infantry Division (Mechanized) from Fort Carson, Colorado, launched a coordinated attack across the Colorado River at Lake Mojave in a surprise move timed with the more southerly 2d Division's move westward, the immediate objective being the desert metropolis of Needles, California, and the securing of Davis Dam. Other units identified in the northern attack were the 191st and 258th Infantry Brigades. Infantrymen of the 258th, supported by their own artillery, crossed the Colorado River starting at midnight Sunday 17 May (D-day). They used assault boats to effect a crossing about ten miles north of Needles, after all bridges in the area had been knocked out. The brigade crossing took only 1 hour and 20 minutes. The deepest penetra-

tion reached on 18 May was in the vicinity of Sacramento Springs. Crossings were also reported at Parker and Quien Sabe Point. Nezonan forces moved as far west as the Big Maria Mountains. Nezonan air forces struck as far west as Mather AFB, California. Air strikes included low-level strafing attacks and conventional bombing. Working hand in hand with the Army ground forces at each river crossing, Tactical Air Command forward air controllers (FAC) arranged for fighter cover to fly over the bridgehead to ensure that no further interruption from attacking aircraft interfered with the crossings.

The operation involved the transport of tanks and armored personnel carriers across several hundred meters of water by engineer units in support of the assault. The operation was made particularly difficult by steep, deeply eroded banks and loose soil on both shores.

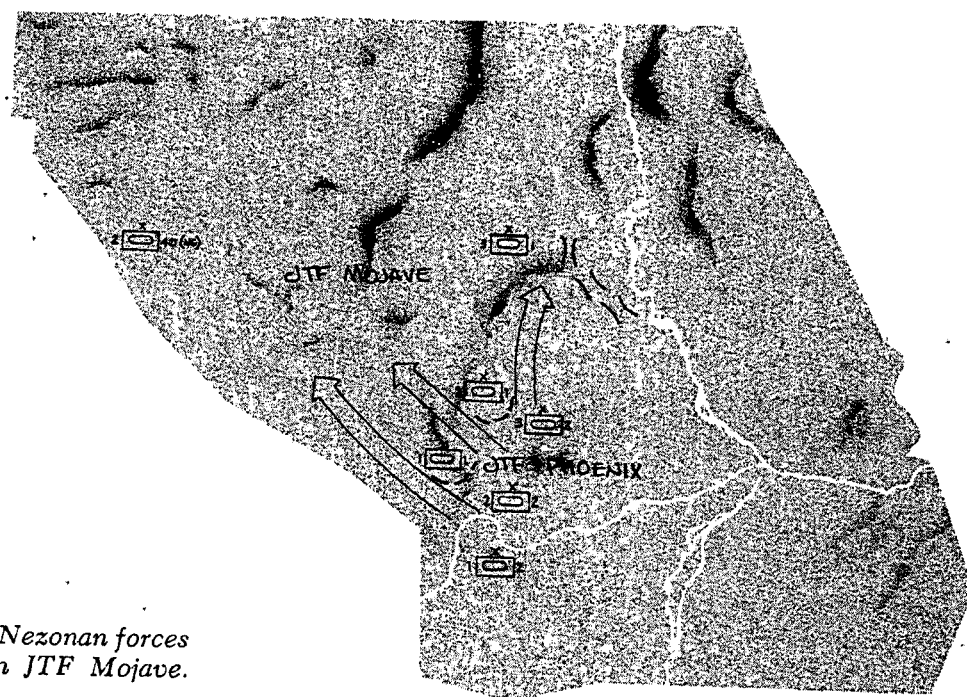
The 258th Infantry Brigade's participation in the assault as an element of the 5th Infantry Division (Mech) marked the first time a major combat element of the Army National Guard had taken part in a field exercise as an element of an active Army combat division.

The ground situation through D + 2 remained fairly stable in the north, with the 5th Infantry Division holding a bridgehead approximately four miles in depth. In the south, however, the 2d Armored Division had expanded its bridgehead to a depth of approximately 25 miles and was preparing for a major breakout. During the night of D + 1-D + 2, JTF Mojave moved its corps reserve into a blocking position along the main avenue of approach in the south.

During the first three days interceptors from Air Defense Command played a major role in supporting the efforts of each force in gaining air superiority, flying on the average of 2½ sorties per aircraft per day.

#### *ground/air warfare*

This spacious western area was chosen for this particular maneuver so that Army heavy armored units would have room to move and demonstrate their maneuverability and driving power. Their moment of triumph came on 20



Map 2. On D+3 Nezonan forces put a squeeze on JTF Mojave.

May (D+3) as the 2d Armored Division scored a major breakthrough in the area northwest of Blythe by executing a turning movement, penetration, and flanking attack, causing a complete collapse of the Mojave southern defensive line (Map 2). Units of its 1st and 2d Brigades had overrun the 1st Armored Division command post, capturing the division chief of staff, 69 other personnel, and a number of vehicles.

Units of the two opposing armored divisions were intermingled, and the status of the defending forces in this area was unclear, though their danger of being overrun was evident. In the center, units of the 5th Infantry Division (Mech) and the 258th Infantry Brigade continued to make steady progress west of Needles. In the extreme northern sector Task Force Linvill, of the XVIII Airborne Corps, Fort Bragg, North Carolina, continued to defend successfully west of Searchlight against attacking battalions of the 5th Division. The task force consisted of two cavalry squadrons, an airborne infantry battalion, and an armored artillery battalion.

Exercise Desert Strike was a special chal-

lenge to the Tactical Air Command in several ways. First, it gave TAC a chance to operate in a training exercise with air bases whose distances and locations in relation to the combat areas were commensurate with those that could very well be found in an actual war. Second, it employed simulated tactical nuclear weapons under controlled conditions. And third, it provided an excellent opportunity to demonstrate clearly the flexibility of U.S. tactical air power.

The peril of the 1st Armored Division in the Cadiz Valley on 20 May provided a very good chance to demonstrate this tremendous flexibility of air power. The stage was set when the U.S. 2d Division made a surprise nighttime thrust against the JTF Mojave flank, defended by the U.S. 1st Armored Division. The 2d Division's armored column penetrated 75 miles on the flank and to the rear of the unsuspecting Calonia defenders. By dawn, when the 1st Armored Division commander discovered the situation, the threat was clear and unmistakable. The enemy tank columns had to be blunted immediately, or the entire forces of Calonia would be vulnerable. The

commander of JTF Mojave's XVIII Airborne Corps was in desperate need of maximum tactical air support immediately. He called on the Calonian Air Force, and within a short time a squadron of 18 TAC fighters was on hand for close air support against the invading armored force.

But this was a simulated war, and umpires must be present at an attack or crucial situation to score the success or failure of the tactical situation. They also determine losses, damage to equipment, etc. The absence of an umpire can mean failure to shroud a well-planned and rapidly developing or fast-moving tactical operation. In the Cadiz Valley engagement, the fast-moving tanks of the 2d Armored had outsped the umpires, leaving them far behind. Another quick decision was necessary. The corps commander, wanting to leave no doubt about the final results of his tactical air strikes against the tanks, called for air reinforcements. Within 15 minutes a second squadron of 12 fighters, operating from a distant base, was on the scene, giving the Calonia defenders a mass of 37 supersonic tactical fighters to smash 50 advancing tanks of the 2d Armored Division. The results were definite—the invading force was destroyed and the flank of Calonian forces was protected.

The odds were very uneven, of course: 37 fighters against 50 tanks. But the situation was desperate, and time was a factor. The high mobility of supersonic aircraft was the means of providing overpowering odds within minutes. Then, too, the missing umpires had to be convinced. General Meyer, Chief Controller (Umpire), explained the situation: "It would not be possible or desirable to mass an effort of this size against each and every ground target. We must have sufficient land combat forces to deal with most threats of this kind, but we know that we have the means to deal with a major emergency, such as occurred in the Cadiz Valley."

A new technique, recently developed by the Air Force and tested in a tactical situation for the first time during Desert Strike, helped to give the tactical fighters more punch during this encounter with the 2d Armored Division and was an important factor in the victory as

well as a surprise to the invading forces. It was perhaps even more important, though less spectacular, than the rapid massing of tactical air power inasmuch as it gave the fighters limitless "staying power" over their ground targets.

Miles above the ground battle in the Cadiz Valley, aerial tankers of the Strategic Air Command and North American Air Defense Command were circling. Air National Guard and Tactical Air Command fighters, giving close air support to the Calonian ground forces, pressed the attack to the limit of their fuel reserves. Then, instead of returning to base, they climbed to the SAC tankers, refueled, and returned to the attack. In every war and training exercise in the past when a fighter aircraft began to run low on fuel, the pilot was forced to break off the fight and return to base. Often this meant discharging the rest of his ammunition against targets of opportunity on the way home or landing with it unused. This was not the case in Desert Strike.

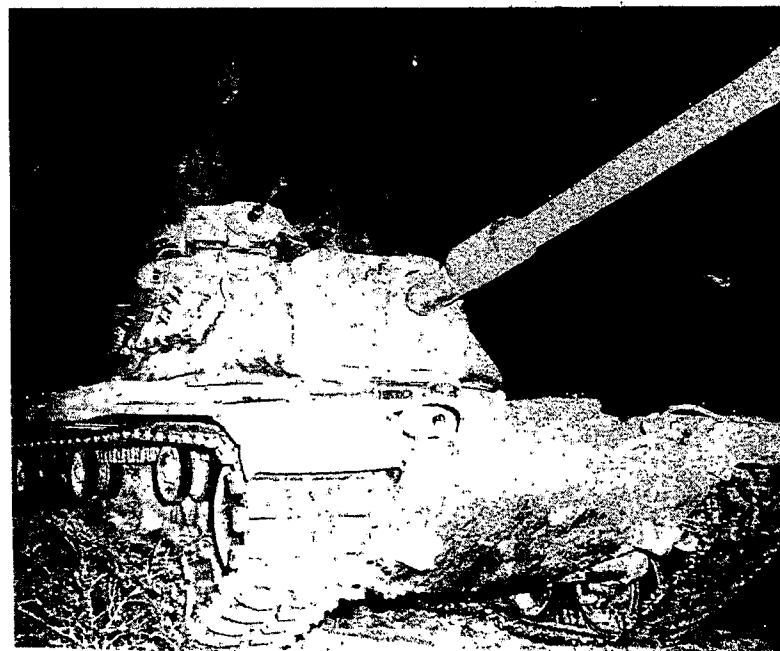
More than 8 million pounds of jet fuel were transferred in aerial refuelings during Desert Strike. At no point were attacking "enemy" fighters able to "destroy" enough of the tankers to halt air refueling operations. One F-100 operating from Biggs AFB, Texas, refueled five times from a KC-135 and was airborne for 6 hours 20 minutes.

Another advancement over earlier warfare techniques used in Desert Strike for the first time was night tactical air warfare. During World War II and the Korean War tactical air operations were limited largely to the daylight hours. In Desert Strike large-scale tactical air operations were carried on by Calonian defenders at night in the application of a new tactic, dubbed "Night Owl." This technique consists of a continuous attack by flare-equipped jet fighters. The flares used are so far advanced over those of World War II and Korea that they can light an area as large as an air base. Each fighter element explodes a new flare as it completes its attack, illuminating the target for the next element.

The reconnaissance essential to identify and assess the importance of such targets was gathered, day and night, by TAC RB-66 and



*The M-60 machine gun (above) mounted in anti-aircraft configuration. . . . Even by the dark of night swift-moving M-60's of JTF Phoenix's 2d Armored Division invaded JTF Mojave territory.*



RF-101 aircraft using photography and more exotic infrared and electronic means. A complex up-to-date system of strobe lighting equipment was used on two RB-66B aerial reconnaissance aircraft flying night photoreconnaissance missions out of Norton AFB, California, for JTF Mojave. The light system is installed in the aircraft bomb bay, and each flash has a duration of one-thousandth of a second. It is set off when the pilot triggers the camera shutter. More than 35,000 watts of electricity flow into each light, providing enough illumination for clear aerial photographs of enemy ground targets.

#### *counteroffensive*

Early on the morning of 21 May (D + 4) Exercise Desert Strike escalated into nuclear warfare as the Calonian Air Force launched the first simulated nuclear attack of the war. At about 0500, Nezonan air bases at Luke, Davis-Monthan, and Yuma in Arizona, Biggs in Texas, Hill in Utah, and Nellis in Nevada were struck with nuclear weapons by tactical fighters. Succeeding strikes destroyed the bridges across the Colorado River at Needles and north of Davis Dam. Finally, strikes were directed against the advancing columns of the 2d Armored Division in the vicinity of Cadiz and Bagdad. The results of these attacks were decisive: Luke—out of action for 24 hours and severe damage for 8 hours to 2 fighters and 19 reconnaissance aircraft; Nellis—extensive damage to 3 fighters and to hangars, buildings, and supplies; Biggs—severe damage to 2 fighters and extensive damage to vehicles; Davis-Monthan—base out of action for 24 hours, severe damage to 12 fighters, and extensive damage to vehicles; Hill—minor damage; Yuma—severe damage to fighters and extensive damage to vehicles, supplies, and petroleum stores.

The decisive victory of the Calonian Air Force over the 2d Armored Division's heavy tanks in the Cadiz Valley on 20 May seemed to trigger a chain of events in which the JTF Mojave evidently decided to go all out to turn the tide of battle. In addition to nuclear strikes by fighter aircraft on JTF Phoenix's air bases

on 21 May, a major threat in the southern sector was averted on the same day when nuclear strikes by Honest John missiles on the 2d Brigade, 2d Armored Division, caused this force to withdraw 25 kilometers to organize and recover. The sting was definitely felt by the invading forces, and JTF Mojave sensed a change in the tide of battle and threw additional reserves into the conflict and at the same time began mobilizing additional National Guard and Reserve forces.

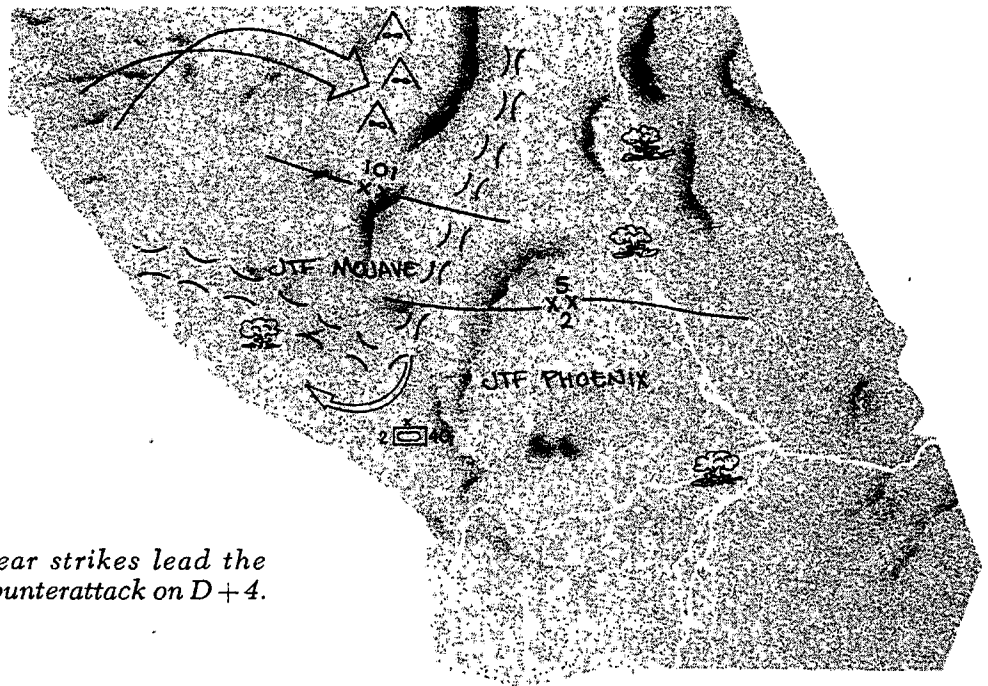
During this period two airborne brigades were airlanded at assault airstrips to reinforce the Mojave defensive line. Over 85 C-130 aircraft airlanded 8000 troops and 3500 tons of equipment in the forward combat area in less than 36 hours, using a total of three strips (Map 3). The primary assault landing strip used was 15-mile-long Bristol Dry Lake, on which the C-130's practically selected their own runway. Using a unique system on this strip, the C-130's touched down on one side of the lake, made a 90° right turn, offloaded, turned left again, and took off. This system permitted a touchdown rate of one aircraft every two minutes.

The Nezonan Air Force was capable of striking back, of course. About noon on 21 May simulated nuclear weapons hit Calonian air bases at McClellan, Mather, Hamilton, Lemoore, Edwards, Palmdale, Oxnard, Norton, and George, all in California. The strikes were not decisive because Nezona's air capability had been reduced earlier by the Calonian forces' attacks. Both sides were then engaged in nuclear war, but Nezona forces were being pushed back off Calonian soil as a result of the initial devastating nuclear surprise attack.

On Thursday 21 May the Prime Minister of Calonia, General Nathan Twining, issued the following explanation for Calonia's initiating the use of nuclear weapons in its attack on Nezonan air bases and battlefield targets:

Nezonan forces in overwhelming strength launched a two-pronged attack against Calonia Sunday and throughout Monday. As the world knows, this attack was unprovoked and unwarranted. When Calonia publishes the record of correspondence between the respective war cabinets, which Calonia terminated on Monday





*Map 3. Nuclear strikes lead the JTF Mojave counterattack on D+4.*

after Nezona duplicity was conclusively established, the world will appreciate that Nezona's act of naked aggression must, along with its perpetrators, be condemned and defeated. To allow such aggression to succeed, to permit Nezona to gain and hold one square inch of Calonia territory, would be to repudiate the values of the civilized world and the moral standards of the Organization of Western States.

In an effort to stem Nezonan attack and to mount our own counterattack, we have found it necessary as a last resort to utilize nuclear weapons. We informed the Secretary-General of the ows on Monday that we would make every effort to confine the conflict to the tactical battlefield and to avoid escalation to nuclear weaponry. We held out as long as possible and authorized their uses yesterday afternoon. We have employed small weapons against military targets only, have authorized air bursts only in an effort to minimize fallout, and have instructed our commanders to take every precaution to protect non-combatants, Calonians and Nezonans alike. We are informed that fallout has been minimum and that Calonians can go about their daily tasks without fear of hazards to their health.

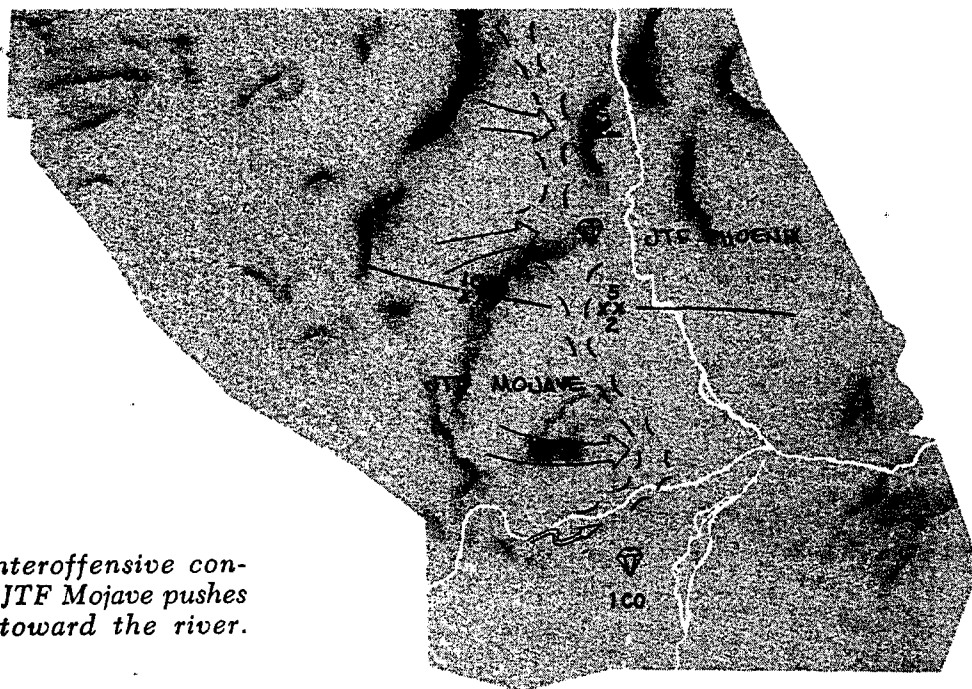
At noon on D+6, after a 24-hour adminis-

trative break, JTF Phoenix resumed its attack, and by the morning of D+7 it had successfully penetrated the Mojave defenses in two areas. By 1500 hours on D+7 the Phoenix attack stalled because of overextended lines of communication. JTF Mojave seized this opportunity to launch a counteroffensive to drive Phoenix back across the river.

At 0620 on D+8, a brigade of the 101st Airborne Division was parachuted 30 miles behind Phoenix lines to seize a critical pass and await the linkup of the armored forces (Map 4). A total of 67 C-130 aircraft was employed in this drop, 27 carrying troops, 40 carrying heavy drop. This was a very successful operation, with only one abort and minimum injuries to the paratroopers. A follow-up airdrop ran into difficulty when attacking Phoenix fighters struck the staging base while the airborne troops were loading, destroying over 31 aircraft and inflicting heavy casualties on the crews and airborne troops.

SAC KC-135 tankers, attached to each JTF, flew maximum effort during this period to permit deep penetration by fighters on counter-air missions. On D+8 Mojave tankers completed over 150 mid-air refuelings in support





*Map 4. The counteroffensive continues on D+8 as JTF Mojave pushes Nezonan forces toward the river.*

of offensive actions.

By dusk on D+8 Mojave had successfully recaptured a bridge over the Colorado River and had forced Phoenix into a full withdrawal. In the north the attack by the 101st Airborne Division drove the opposing 5th Infantry Division back across the river into its homeland. In the south, however, the two armored divisions continued to clash west of the river.

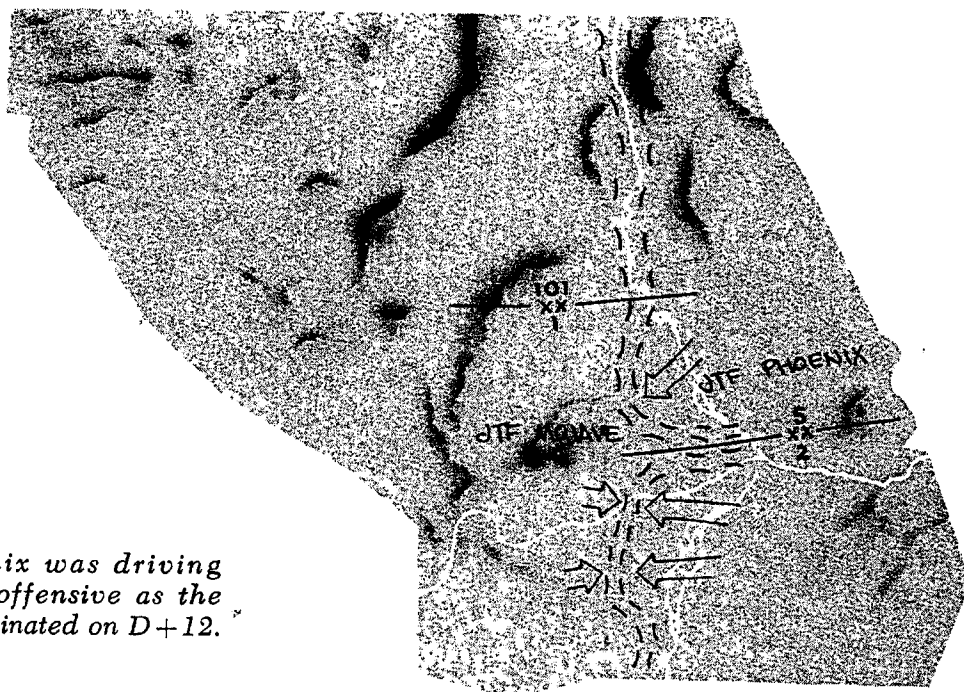
The Mojave Reconnaissance Squadron (RF-101 and RB-66) was used quite extensively during this period to locate bypassed Phoenix units attempting to extricate themselves. This was a particularly difficult mission, since these forces had to be distinguished from friendly Mojave ground forces.

JTF Mojave continued to push hard against Nezonan forces after the initial nuclear strike gave it an edge, and on 26 May (D+9) the 5th Infantry Division of JTF Phoenix started to withdraw across the Colorado River. Also on that date the Nezonan Air Force launched an all-out nuclear attack on air bases of Calonia in addition to five nuclear strikes against enemy positions on the battlefield. Calonian forces continued their attacks with nuclear

weapons against the strong points of Nezona, but they were caught off balance by the increase in the tempo of attacks launched by JTF Phoenix. Further adding to the new punch of Nezonan forces was the reconstitution of both land and air forces by expanding mobilization.

THE PARTICIPANTS in Joint Exercise Desert Strike were aware that the planned deadline for the cease fire was drawing near, but they did not know the exact hour. Each JTF commander, with his staff, was trying desperately to register with the umpires, score points, and win the exercise. They tried to pull surprises, catch the opponent off guard and off balance, gain ground by use of nuclear weapons or mobile maneuvering or concentration of force. JTF Phoenix fought to keep the Calonian forces off Nezonan soil. All these efforts brought about major changes in the tactical situation right up to the cease fire at 1700 on 29 May. At that time almost all elements of the 5th Infantry Division had recrossed the Colorado River, reinforcing the northern sector of the

*Map 5. JTF Phoenix was driving hard to regain the offensive as the desert war games terminated on D+12.*



pocket held by the 2d Armored Division. The exercise controllers believed that the tactical commanders had had ample opportunity for free play and that the objectives of the exercise had been achieved to a degree equal to or surpassing all expectations. At that point there was no need to prolong the exercise and mount the cost (Map 5). Air and ground units received outstanding training in joint operations associated with the simulated use of both conventional and tactical-nuclear weapons. This exercise provided a rare opportunity for evaluating tactical air action in support of a highly fluid, fast moving ground situation. Tactical air action in support of ground forces was extensive. The Mojave ground forces requested 1636 sorties, of which 1628 were flown and 1500 judged effective. Phoenix ground forces requested 1246 sorties, of which 1163 were flown and 1080 judged effective.

"Out of this huge Desert Strike effort," General Meyer said, "we have advanced the defense of the United States, while identifying many areas in which much greater concentration and study is required. As progress is made in those fields, it must be tested in field exer-

cises such as Desert Strike. There is simply no adequate substitute for this type of realistic evaluation."

General Adams, in a statement summarizing the exercise, said, "It will be a matter of months before all the data obtained during the course of Joint Exercise Desert Strike can be properly evaluated. Complete and sound conclusions based solely on what one or a few men can derive from necessarily limited observations are not possible at this time. There is however no question in my mind that through a process of careful assimilation and evaluation of data we shall obtain from this maneuver guidance far beyond anything we had anticipated a few weeks ago." In his praise of the reserve forces General Adams added, "I am gratified by the results achieved by reserve component units participating in the Exercise. We literally have a 'gold mine' of information which when refined will provide us a large body of highly valuable knowledge for use throughout the services."

Reliable sources have estimated that Exercise Desert Strike cost about \$54 million, the costliest exercise since World War II.

Asked why the exercise was considered worth the outlay of funds, Pentagon officials cited these reasons, among others:

It is the first time since World War II that we have been able to get two armored divisions into an exercise maneuver area in the United States where they could operate as freely as required for proper armor field training.

The exercise also gave us a chance to

simulate realistically the employment of tactical nuclear weapons. This let us better explore tactical use of nuclear weapons in a limited war situation.

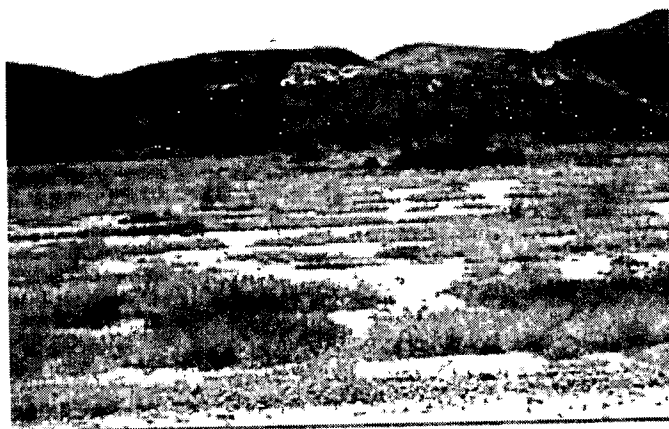
Joint Exercise Desert Strike was not only a thorough test of men and equipment, but also an ideal opportunity to test and further improve several operational concepts for joint air-ground operations we have been developing and improving over the past several years.

Defense plans were quickly prepared. Reconnaissance and planning for the attack was initiated at all levels. Outposts were established at all potential crossing sites to measure the current velocity and the rise and fall of the river. This was essential due to the changing rate of flow through the control gates upstream at Parker Dam. One such outpost discovered that for approximately three to four hours early each morning a three-foot drop in the water level made the Colorado River fordable for tracked vehicles with a temporary depth of three to four feet.

Border patrol and reconnaissance aircraft also discovered two passes useable for tracked vehicles through the Big Maria Mountains on the west bank of the Colorado. These mountains had heretofore been thought to be impassable to all vehicles. High-oblique photography was taken and scale measurements confirmed the feasibility of crossing the 1st Brigade in front of and through the Big Maria Mountains. The enemy did not appear aware of the passes and positioned no significant forces along the river there. 3d Brigade would use the ford.

Routine engineer reconnaissance had already located two other sites where bridging and rafting could be conducted. One of these, the most likely bridge site in the Division Zone, in the 2d Brigade sector, appeared to be well defended by the enemy. However, few, if any, enemy forces were opposite the 191st Infantry Brigade in the area between Parker and Parker Dam.

Accordingly, instead of a narrow-front crossing against the defended sector, it was decided to cross the division at four different points, Figure 1: swimming APC's and rafting tanks in the 1st Brigade sector, using assault boats and rafts in the 191st Infantry Brigade sector, and, as an added deception measure, fording in the 3d Brigade sector

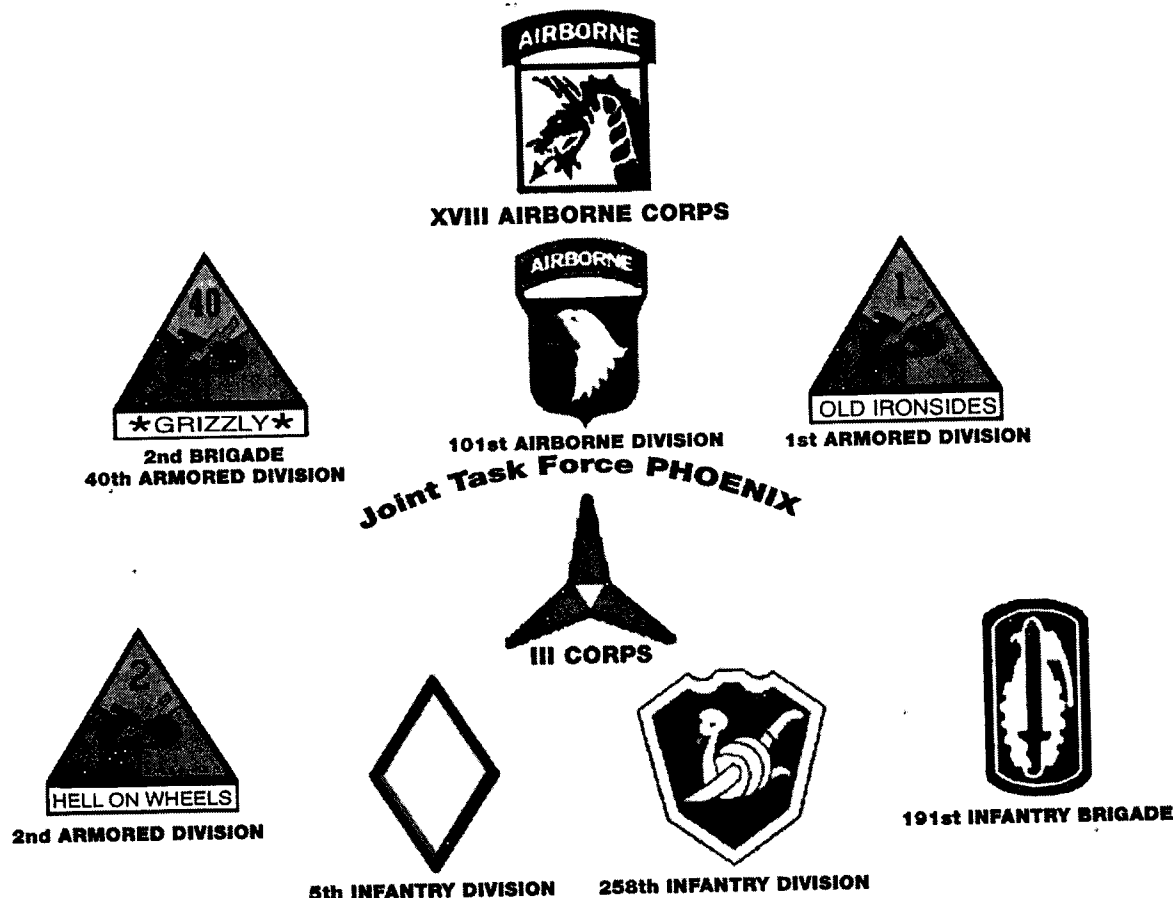


some six hours after the other three brigades had launched their attacks. H-hour was set at 2100 hours for the initial attack, D-Day to be announced.

On 16 May, Corps directed that the crossings would be launched on the night of 17 May. Units were moved to forward assembly areas. Engineer equipment was pre-positioned close to the river on the night of 16-17 May and thoroughly camouflaged. A key part of the 1st Brigade's plan was the seizure, at EENT, of the two passes through the Big Maria Mountains by two heliborne forces. This was essential, lest the enemy "bottle up" the entire brigade on the far shore by establishing strong blocks in these two exits from the cul-de-sac formed by the Big Marias and the Colorado River.

The attack was launched on schedule and by 180700 May, 1st Brigade had all infantry and most of one tank battalion across and was through the south pass in the mountains virtually unopposed. 2d Brigade had secured its O-2 line but was contained by strong enemy counterattacks. 3d Brigade had all tracked vehicles including direct support artillery across the ford except for two M-108 howitzers which were held on the near shore when the water level rose again. Approximately forty 1/4-ton command vehicles were carried across the ford "piggy-back" on M-60 tanks. Initial resistance was light. 191st Infantry Brigade was across, except for its Trains, and was pushing the attack north and west against light resistance. The enemy, a brigade of the 1st Armored Division, was unable to concentrate against a single key crossing and could only fight a delaying action.

By evening of the 18th, a float bridge was completed behind 2d Brigade. By 190900 May, 36



# DESERT STRIKE

## AN EXERCISE IN MOBILITY

By MAJOR GENERAL EDWIN H. BURBA

Desert Strike was a "limited" nuclear war between mythical Nezona and Calonia. It was fought in the Arizona-California desert over the water rights to the Colorado River, the boundary between the two nations.

This limited war exercise afforded limitless opportunities to improve training, and to test and evaluate the organization, equipment and doctrine of today's armored division. This article examines the lessons, old and new, that were highlighted by the 2d Armored Division's operations in Desert Strike.

Having closed in the maneuver area on 10 May, the Division was directed by III Corps to establish

a patrol and checkpoint system along approximately 130 km of the east bank of the Colorado River border. The 5th Mechanized Division on the north flank of the Corps had a similar mission. At this time, the 191st Infantry Brigade (RES) consisting of one battalion of infantry, one tank company, one battalion of 105mm artillery, Brigade Headquarters and limited support elements, was attached. The patrol and checkpoint system was established 12 May, using the 2d Sqdn, 1st Cavalry, elements of the 191st Infantry Brigade, and a reconnaissance platoon of the 1st Bn, 50th Infantry. Corps further directed preparation of two contingency plans; one for a mobile defense of the border area and one for an assault river crossing of the Colorado River and subsequent attack to seize Fort Irwin, California, 250 km to the west.

MAJOR GENERAL EDWIN H. BURBA was Commanding General, 2d Armored Division, Fort Hood, Texas.

ARMOR—September-October 1964

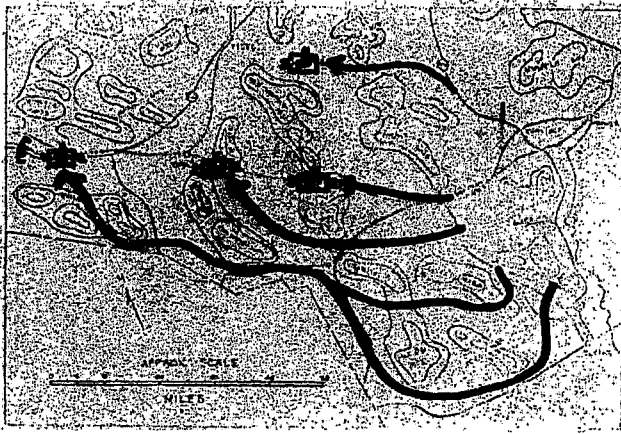


Figure 2. Exploitation

hours after the initial assault, all elements of the division were across (except the division main command post which crossed the night of the 19th) and a bridgehead 30 km deep and 55 km wide had been secured.

Tactical principles highlighted thus far were:

1. Thorough reconnaissance by commanders and key staff to insure intimate knowledge of the area prior to crossing a major stream is essential. Map reconnaissance alone is inadequate for the planning headquarters (division).
2. Cross major stream lines on a broad front—do not put all hope of success on only one or two crossing sites. Enemy nuclear capability must be reckoned with. Broad front crossings make the defender's task more difficult.
3. Small-scale air mobile operations, well-planned and coordinated, contribute significantly to the overall accomplishment of the mission. In this case, the crossing of an entire brigade was dependent upon the success of such operations.

The attack and exploitation phase (19-23 May) now began.

The Division plan called for a containing action on the part of 3d Brigade on the north; a shallow envelopment of the south flank by 2d Brigade and a deep envelopment by 1st Brigade further to the south, going some 100 km into the enemy's rear, Figure 2. This operation was highly successful and by mid-afternoon on the 20th, 1st Brigade had captured Bagdad, the SASP of 18th Airborne Corps, the Corps POW cage, and the bulk of the Support Command of the 1st Armored Division. 2d Brigade, in the shallow envelopment,

met heavy resistance and by nightfall on the 20th was some 20 km south and east of the 1st Brigade.

On the 21st, mopping-up operations between Bagdad and Cadiz resulted in the capture of 18th Airborne Corps command post by 1st Brigade. The 2d Sqdn, 1st Cavalry earlier had made contact with the 5th Mechanized Infantry Division elements on the Division north boundary and had succeeded in capturing the forward command post of the 1st Armored Division.

On 21 May, Calonia initiated nuclear warfare to stem the invasion. A change occurred also in the balance of power between Nezona and Calonia as the two brigades on the Nezonan side (191st Infantry Brigade (RES) with the 2d Armored Division and 258th (NG) with the 5th Mechanized Infantry Division) departed the maneuver area, having completed their two weeks ANACDUTRA. Simultaneously, a brigade of the 40th California (NG) Armored Division joined the Calonian forces.

The 40th Armored Division's brigade was not allowed to enter the operation peacefully, however, and detrained their tanks while under attack by 1st Brigade in the vicinity of Bagdad and 3d Brigade in the Fenner-Danby area on 21 and 22 May.

A 24-hour administrative break occurred 22-23 May and all Nezonan forces were halted in place.

On the 23d of May, 3d Brigade renewed its attack by moving north behind the Old Woman Mountains after dark, then attacking west through Essex and Fenner. By early 24 May this brigade had succeeded in capturing or overrunning most of the brigade of 40th Armored Division, 18th Airborne Corps Artillery Command Post and securing Granite Pass, Figure 3. This shift in the location and direction of the main attack from south to north flank apparently seriously disrupted





the enemy's defenses. His reaction was violent and all available enemy reserves were committed in the vicinity of Granite Pass. 3d Brigade, outnumbered, was forced to withdraw gradually to the east during the afternoon. In late afternoon on 24 May, 2d Brigade, in the center, was forced to withdraw from Chubbuck Station under attack by an enemy heavy brigade supported by nuclear weapons and tactical air.

This exploitation phase emphasized the value of night movement and night attack when enemy air cannot maintain observation of your forces. (1st Brigade's envelopment, 3d Brigade's attack on the north to seize Granite Pass).

In addition, we proved the value of deep penetrations aimed at command and logistical complexes. In combat the enemy cannot recover from each thrust as he always does in maneuvers. When moving cross-country, our battalion task forces moved *deployed*, ready for immediate action on contact. Column movements result only in "lead-tank actions" and a long time lag before the battalion's total firepower can be brought to bear. Deployed movement was highly successful wherever the terrain permitted.

Planning this attack to go 150 km deep into enemy territory required much forethought to POL problems. One solution we adopted to keep gasoline "up" to the M-113 APC's (which have a shorter cruising range than the diesel-powered M-60 tank) was to use M-113 APC's as tracked POL carriers. 500-gallon collapsible fuel cells were lashed inside some forty M-113's of the four mechanized battalions. An APC, so used, will swim, is not a signature item, and has the same ballistic protection and cross-country mobility as any other personnel carrier.

We maintained a three-day movement capability within the division.

One day's POL supply was maintained in battalions, one in brigade Trains and one in division Trains. This required an aggressive approach by Support Command. The Commanding Officer, Support Command, designated a senior support command representative who stayed with each brigade's Trains and coordinated the forward movement and positioning of POL stocks. In addition, Support Command itself was always well-forward and within easy reach of the brigade Trains area.

The fourth phase of Desert Strike, Withdrawal and Mobile Defense (24-28 May), was conducted against an appreciably superior enemy force. The 5th Mechanized Infantry Division on our north flank was withdrawn by III Corps to the east bank of the Colorado River after its attack was halted. This permitted the concentration of almost all of 18th Airborne Corps against the 2d Armored Division.

The enemy counteroffensive on 24 May came on two major axes—the first southeast down the Cadiz Valley, the second around the north flank of 3d Brigade through the 2d Sqdn, 1st Cavalry screen to Highway 95 and thence south towards Vidal Junction. The 2d Brigade succeeded in delaying and finally halting the Cadiz Valley thrust in the vicinity of Rice. The 2d Bn, 50th Infantry, holding the vicinity of Vidal Junction as III Corps reserve, was released to division control and engaged the enemy moving south on Highway 95 on the afternoon of 24 May. 3d Brigade was ordered to hold its forward position in the Old Woman Mountains. The 1st Brigade was withdrawn during the afternoon and night from the Bagdad-Amboy area to go into division reserve in the Midland-Rice Valley area. Upon arrival, it encountered and mopped up a company of airborne infantry which had parachuted in the vicinity of Midland.

On 25 May, the 1st Brigade was committed in the Vidal Junction area and succeeded in dislodging enemy elements which had pushed the 2d Bn, 50th Infantry south through this key crossroad. On the night of 25 May, 3d Brigade was moved south and east to attack this enemy force (now estimated at two brigades) from the north, along the axis of Highway 95. Night movement was again successful, and, on 26 May, 1st and 3d Brigades destroyed all the enemy in the Vidal Junction area with converging attacks from south and north.

The above action permitted consolidation and organization of a firm bridgehead on the west bank of the Colorado, extending from Parker Dam on the north through Vidal Junction, the Riverside Mountains, Midland and the McCoy Mountains, with 3d Brigade on the north, 1st Brigade in the center, and 2d Brigade on the south, Figure 4.

It was the intention of the Commanding Gen-



eral, III Corps, to move the 5th Mechanized Infantry Division into this bridgehead from the east bank of the Colorado and then to launch a counteroffensive to the west.

Problem play was again halted administratively, however, on 27 May for 30 hours, and no movement of Nezonan forces was permitted. When this break ended on 28 May, the enemy had been permitted to regroup, and again attacked in strength to the east from the Rice area and south along Highway 95 towards Vidal Junction. In addition to these armored thrusts, elements of the 101st Airborne Division had been moved in trucks to the vicinity of the McCoy Mountains on the south flank of the 2d Armored Division. The attacks in the Rice Valley and along Highway 95 were defeated by a series of local spoiling attacks, supported by nuclear weapons and by changes in Task Organization which "beefed up" the 3d Brigade and the 1st Brigade at the expense of the uncommitted 2d Brigade on the south.

On the night of 28-29 May, elements of the 5th Mechanized Infantry Division were rafted and swam across the Colorado River in the vicinity of Havasu City, north of Parker Dam, to expedite their reinforcement of the bridgehead.

Throughout the 29th, the bridgehead positions were held against piecemeal enemy attacks from the north and the west. Simultaneously, final orders for the counteroffensive on the evening of 29 May were completed and issued. The enemy force to the west appeared to have spent its strength by early afternoon and was pushed back to the vicinity of Rice. The remnants of the enemy force on the north were "pocketed" in late afternoon when the lead elements of the 5th Mechanized Infantry Division drove south on Highway 95 towards a link-up with the 3d Brigade north of Vidal Junction (Figure 4).

In the south, the 2d Brigade reported nothing stronger than enemy truck-mounted airborne infantry, supported by four tanks in the vicinity of Midland. This force was counterattacked and contained south of the Midland Pass, as the 3d and 1st Brigades prepared to launch the now-almost-habitual night-attack north and west up the Rice-Cadiz Valley.

In my opinion, had the tactical play not been halted at 291700 May, the two-brigade attack, scheduled for 1800 hours, would have been highly successful. Although the 3d and 1st Brigades had been assessed casualties during the day's fighting, they were both "topped off" with POL and both had slept and rested the night before. The enemy, on the other hand, appeared to have exhausted his strength in piecemeal attacks against the bridgehead and we could detect no sizeable intact enemy reserves to the west.

What principles were highlighted in these last two phases?

1. In the field of command: Mobile warfare cannot be controlled from a secure and fixed command post. The commander (brigade or division) must be at the decisive point (and recognize it as such) *before* a decisive action takes place. A tactical command post of a few necessary communications vehicles must be well-forward in the battle area. It must be capable of rapid displacement to avoid being overrun in the course of the action. I found it necessary to supplement this control means by frequent helicopter trips each day to each brigade commander and sometimes to battalion commander level. Subordinate commanders must continually be aware of your future intentions and understand fully your concept.

2. For armored units in open country, a static defense is impossible in nuclear war. A unit identified and located is too easily destroyed. We found the best alternatives to be spoiling attacks—shifting of reserves, changing the weight and direction of counterattacks, and keeping the enemy off balance. When opportunity is afforded the defender, he must commit his reserves or lightly committed units to destroy the enemy *forward* of the critical area.

3. In desert warfare, vital units and facilities (CP's, nuclear weapons systems, POL trains) must displace frequently, disperse, and avail themselves of all possible camouflage and concealment. 2d Armored Division's Honest Johns, 8-inch howitzers, and Support Command Trains did not receive a single nuclear strike throughout Desert Strike.

Throughout the exercise I was impressed by two pieces of equipment relatively new in the 2d Armored Division. The M-113 APC is an excellent vehicle: good speed, mechanically reliable, swims well and is versatile. The M-60 tank is superb: its increased fording depth, extended cruising range and mechanical reliability mark it as outstanding. Its 105mm gun also gives it greatly improved firepower, though this weapon was not actually tested on this exercise.

In summary, Desert Strike was an exercise in mobility. It proved the value of an offensive attitude, aggressive leadership at all levels and constant command attention to logistical problems. The armored division of today proved to be a worthy successor to the victorious armored formations which fought in the desert of North Africa in World War II.



# CASUALTY OF WAR (GAMES)

by Francis G. Blake  
Fullerton, California



Overall view of the foxhole containing the Jeep fragments, wood and cloth straps. Windshield glass fragments were found where the author is standing to take this photo. The wreckage was dragged down off the ridge to the right by the Army salvage crew.

**L**arge portions of California's Mojave Desert were the site of military training activities and war games during WWII and in 1964. The latter, termed Operation "Desert Strike", involved airborne armored units. This is the story of a vehicular casualty of the airborne operations.

On March 26, 2004, the Southern California Chapter was in eastern Riverside country exploring Styx Pass, a mock battlefield often used during WWII and again in 1964. The Pass separates the Big Maria Mountains from the Little Maria Mountains at the southern border of Rice Valley. This is still open desert country. The first war games occurred here in 1942 when the 7th Motorized Division (later renamed the 7th Infantry Division) attached 5th Armored Division units defending the Pass.



Close-up of some of the Jeep fragments. The piece at the lower right is part of an early M series taillight housing.

While walking along the rocky crest of a low ridge in front of Styx Pass, I noticed numerous pieces of windshield glass next to a foxhole. This discovery became a 'red alert' since no evidence of vehicle trails, or even a single track, existed on the ridge. Closer inspection revealed small pieces of metal on the ground surface. Scratching into the soft soil that had been washed into the foxhole over the past 30 years uncovered numerous pieces of metal, wood and cloth straps. Most of the metal pieces were fragments of a Jeep transmission case, gears, shifting forks and the like. Also uncovered were pieces of an early M series taillight, a crushed tire valve stem and an M series safety clip from a lifting eye clevis pin. Large, aluminum hooks were found near the foxhole.

Like evidence found at the scene of a crime, the uncovered debris strongly indicates an airborne M38 or M38A1 Jeep dropped into the rocks next to the foxhole likely because the parachute did not open. The transmission was the point of impact and exploded. The wood is likely from the para-pallet and the straps and hooks were a part of the parachute harness. No doubt the Jeep became instant scrap metal, but I wonder if the foxhole was occupied at the time of the drop.

Truck dual wheel marks on the east side of the ridge indicate an army salvage crew likely backed a wrecker up as far as they could to attach a cable to the wrecked Jeep. Plow marks on the ridge slope indicate the wreck was then dragged down off the ridge to a flat area where it was taken aboard a truck or trailer. Thus, the mortally wounded Jeep became a casualty unfit for duty and was hauled away to the scrap yard.



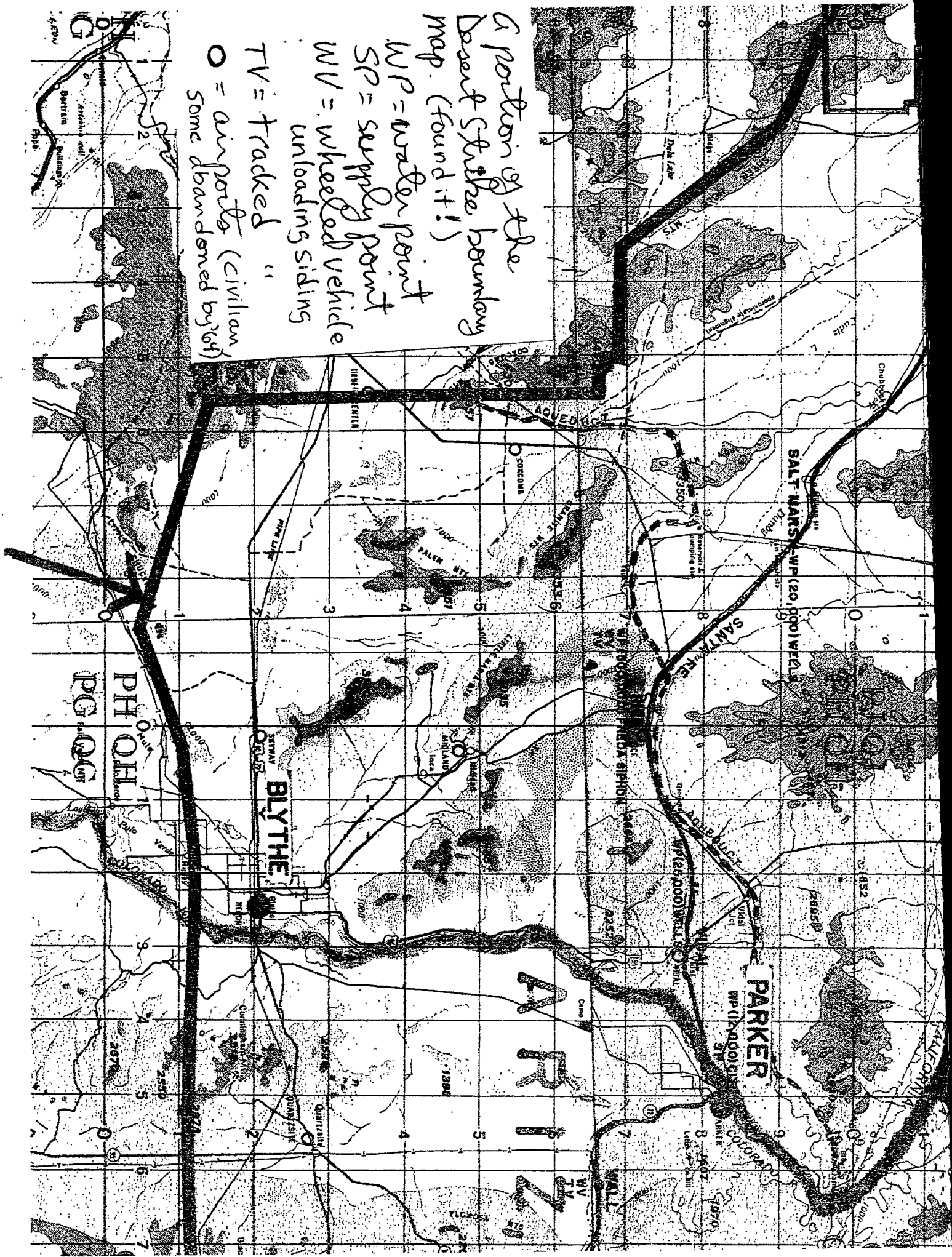
Looking down the side of the ridge where the wreckage was dragged to a flat area. More Jeep fragments and parachute parts were also found here.

a portion of the  
Doest Strike boundary  
map. (found it!) +

WP = water point  
SP = supply point  
WV = wheeled vehicle  
unloading siding

TV = tracked

○ = airports (civilian, some abandoned by 1st)



# DESERT STRIKE REVISITED U.S. ARMY FORCES



ARMY OF THE UNITED STATES



EGV - May 5, 6, 7, 2006



The Ancient and Honorable Order of E Clampus Vitus  
**Billy Holcomb Chapter 1069**

Post Office Box 56086 • Riverside • California • 92517



BILLY HOLCOMB CHAPTER OF THE ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS  
PRESENTS ITS

# **SPRING 2006 CLAMPOUT**

WHICH WILL BE HELD ON

**MAY 5, 6, 7, 2006/6011**

A BRONZE HISTORICAL MARKER WILL BE ERRECTED TO COMMEMORATE



## **"DESERT STRIKE"**



**LOCATED 15 MILES NORTH OF BLYTHE ON LUFKIN ROAD**

**PBC's WILL BE CONDUCTED UNDER GRAND COUNCIL RULES  
IN A CANDLELIGHT CEREMONY ON SATURDAY NIGHT**

### **REDSHIRTS - \$50.00 • PBC's - \$60.00**

**LATE SIGN-UPS AND WALK-INS WILL BE CHARGED \$60.00  
- NO PROMISE OF SHIRTS FOR LATE REGISTRATIONS -**

**REGISTRATION FEE INCLUDES A "BADGE OF THE DAY", A HISTORICAL KEEPSAKE,  
AND A MEAL TICKET GOOD FOR 5 FANTASTIC MEALS - IF YOU COME YOU PAY!!**

**SPECIAL EVENT SHIRTS ARE BEING OFFERED WHEN YOU PRE-REGISTER!**

**BRING WATER, SHADE, CAMPING GEAR & YOUR FAVORITE BEVERAGES -  
CONTAINER FIRES ONLY - BRING CLEAN FIREWOOD!**

**NO WIDDERS - NO PETS - NO GUNS - NO DOGS - NO BAD ATTITUDES  
NO EXPLOSIVES - NO FIRING OF ANVILS - NO OHVS - NO KNIVES**

**MAKE YOUR PAYMENT TO: BILLY HOLCOMB ECV.**

**MAIL TO: GDR NEAL SAMSON, 14052 Pear St. Riverside CA 92508**

**CLAMPSITE ACCESSIBLE TO ALL VEHICLES - TRAVEL ON MARKED ROUTES ONLY!  
SMALL SITES - NO 80' MOTORHOMES!**

## CLAMPSCHEDULE

### FRIDAY

- 4:00 pm **CHECK-IN** (Unofficial) at the Official Place
- 6:30 pm **DINNER** is served by Clamchef Brian Nash & his Crew of culinary experts at the Cookshack!
- 7:01 pm Graybeards Dinner for all visiting Indignitaries: XNGH's Humbugs and Officers... At the Cookshack
- 7:32 pm **CHECK-IN** is open. All PBC's report to the Hangman

### SATURDAY

- 6:01 am All PBC's report to the Hangman's Camp
- 6:46 am PBC's & Sponsors meet at the Cookshack for breakfast with the Hangman
- 6:57 am **BREAKFAST** is served at the Cookshack
- 7:20 am PBC's report to the Cookshack for cleanup
- 8:10 am **CHECK-IN** is open (at the Official Place) & it's Official Presentation of PBC's to the Graybeards for Inspection.
- 8:30 am Enlightenment, Clamphistory and Recitation on "How Good It's Gonna Be"
- 9:30 am Sign-ups for Clamper Olympics
- 9:53 am PBC's leave for Monument Erection
- 10:17 am Clamper Olympics Begin
- 12:02 pm **LUNCH** is served at the Cookshack
- 12:35 pm PBC's Report to the Cookshack for Cleanup
- 3:00 pm PBC Entertainment, including IQ Test and Singing
- 5:16 pm **DINNER** is served at the Cookshack
- 5:45 pm PBC's report to the Cookshack for Cleanup
- 7:12 pm PBC's report to the Hangman's Camp for Preparation for the Queries and the Ordeals
- 8:00 pm Candlelight Ceremony of Induction at the hall of Comparative Ovations... Also, Raffle Prizes and Clamper Olympics Awards!

### SUNDAY

- 6:30 am PBC's report to the Hangman's Camp
- 7:02 am **BREAKFAST** is served at the Cookshack
- 7:57 am **CAMP CLEAN-UP BY EVERYONE!! USE THE DUMPSTER... LEAVE NOTHING BEHIND. THE DUMPSTER IS FOR TRASH ONLY "NOT CONSTRUCTION, DEBRIS OR OTHER HOUSEHOLD ITEMS YOU WANT TO GET RID OF.**
- 10:30 am Plaque dedication, at the monument Site. X-PBC Certificates and Membership Cards distributed **AFTER** dedication!

## HANGMAN

DOYAL "GOT HAY?" TEEL  
SAY'S

"BRING A PBC!"

and show him the other side of the mountain in a way he will never forget!  
But be sure he is clean, sober and not wearing women's clothing!  
**PBC's ARE UNDER THE AUTHORITY OF THE HANGMAN AT ALL TIMES!**

## WHAT TO BRING

Your Favorite Beverage - Artificial Shade - Bring a PBC  
All You're Camping Gear - Water - Dry Camp

## CLAMPSITE RULES

**NO OHV's, DIRT BIKES OR ATC's**  
"The Mule" is allowed for handicapped

## SPECIAL EVENT SHIRT

Special Event T-Shirts are on sale for this event and can be ordered when you sign up before the cutoff date. These shirts are not on sale at the event, so order yours and one for your PBC. Mark your choices on the Sign-up Form.

**NO PROMISE OF SHIRTS AFTER THE CUTOFF DATE**

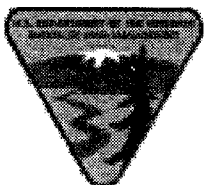
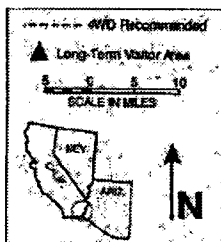
The Chapter intends to buy land..  
Donations to "Land Fund" will be accepted.  
Non tax deductible.

**"LET A BROTHER OF SOBRIETY  
HOLD THE REINS"**



## DIRECTIONS TO: "DESERT STRIKE"

Take your best route to Blythe, California on I-10 go North at Lufkin Road. The Campsite will be on your right about 15 miles. Signs will be up on Thursday



We are guests of the BLM please treat LTVA area with respect and leave your campsite cleaner than you found it. (this includes cigarette butts, pick them up and or field strip them). No civilians should be in the area, but if there are some lingering campers, please use seemly decorum. Removal or disturbing artifacts is unlawful. Violators will be prosecuted.



# PETITION FOR MEMBERSHIP

**E CLAMPUS VITUS**  
**Billy Holcomb Chapter 1069**

## TO THE GRAND NOBLE RECORDER:

I hereby petition for membership the Ancient and Honorable Order of E Clampus Vitus. I certify that I have received my novitiate instruction from my sponsor, Clamper \_\_\_\_\_ and hereby solemnly affirm my belief in the Dictum of the Order, "PER CARITATE VIDUARIBUS ORPHANIBUSQUE, SED PRIME VIDUARIBUS" and wholeheartedly, without reservation, agree to render SATISFACTORY SERVICE at all times.

I further agree to present myself at the ECV hall of Comparative Ovarions at such time and place designated by the NOBLE GRAND HUMBUG, guaranteeing that I shall arrive fully equipped to negotiate the Chasm of Terror and Despair and to reach the safe haven of CLAMPERDOM.

As evidence of my good faith, I forward herewith my gold dust (\$ \_\_\_\_\_) in payment of the initiation fee usually charged each POOR BLIND CANDIDATE. In return I humbly beseech you to transmit my Badge of Office which I will proudly wear when presenting myself for infamous induction. I realize that without this Badge of Office, the Grand Hangman and the DamnFool Doorkeeper cannot permit me to enter the hall of Comparative Ovarions.

Be it known, if you are accepted and inducted, that to remain a Clamper you must attend each and every Clamput or send the required gold dust for remaining active if you can't make it. If you do not you are no longer a Clamper.

Application received \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Witness my Hand and Privy Seal

Application approved \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Application rejected \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Ritual taken \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_  
*Illegal Signature*

Scroll mailed \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

## TO BE DETACHED ONLY BY THE GRAND NOBLE RECORDER

### PBC APTITUDE TEST

(to be filled out by PBC)

check

	Yes	No
I am a jolly good fellow.....	<input type="checkbox"/>	<input type="checkbox"/>
I am interested in CA/NV/UT/CO/OR/WA	<input type="checkbox"/>	<input type="checkbox"/>
(State any Special Field _____)	<input type="checkbox"/>	<input type="checkbox"/>
I can draw or cartoon.....	<input type="checkbox"/>	<input type="checkbox"/>
I can sing.....	<input type="checkbox"/>	<input type="checkbox"/>
I enjoy theatrical work.....	<input type="checkbox"/>	<input type="checkbox"/>
I play a musical instrument	<input type="checkbox"/>	<input type="checkbox"/>
(state which kind) _____	<input type="checkbox"/>	<input type="checkbox"/>
I am willing to help if called upon.....	<input type="checkbox"/>	<input type="checkbox"/>
I am not a jolly good fellow.....	<input type="checkbox"/>	<input type="checkbox"/>
(FOR G. N. R.) CLAMPERATING _____		

### FOR PBC TO FILL OUT. PLEASE PRINT

Full Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone# (\_\_\_\_) \_\_\_\_\_

Occupation \_\_\_\_\_

Age \_\_\_\_\_ Place of Birth \_\_\_\_\_

GDR Neal Samson  
14052 Pear Street  
Riverside CA 92508

SAN BERNARDINO

CA 924 6 L  
27 MAR 2006 PM



## DESERT STRIKE

MAY 5, 6, 7, 2006/6011

FIRST CLASS MAIL  
ADDRESS CORRECTION REQUESTED

*To Clamper:*

Phil Holdaway-Archivist  
3559 N. Wall Ave.  
San Bernardino, CA 92404

92404+2273



## BRING A PBC TO DESERT STRIKE



[www.billyholcomb.com](http://www.billyholcomb.com) • CHECK IT OUT TODAY

PLEASE FILL OUT THIS ENTIRE FORM AND SIGN

# The ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS

## Agreement and Release from Liability

1. I, \_\_\_\_\_ (print your name here) acknowledge that I have voluntarily requested to accompany the Ancient and Honorable Order of E Clampus Vitus for the purpose of dedication various plaques and/or monuments to major and lesser events of California history.

2. I AM AWARE THAT THE MEETINGS OF THE ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS OCCUR IN THE WILDERNESS, AND THAT: DRIVING FROM MY POINT OF DEPARTURE TO SAID MEETING, HEREINAFTER CLAMPSITE; MY PARTICIPATION IN THE VARIOUS ACTIVITIES AT SAID CLAMPSITE AND DRIVING BACK TO MY POINT OF DEPARTURE ARE POTENTIALLY DANGEROUS AND HAZARDOUS ACTIVITIES. I AM VOLUNTARILY PARTICIPATING IN THESE ACTIVITIES WITH THE KNOWLEDGE OF THE DANGER INVOLVED, AND HEREBY AGREE TO ACCEPT ANY AND ALL RISKS OF INJURY AND DEATH, AND VERIFY THIS STATEMENT BY PLACING MY INITIALS HERE \_\_\_\_\_ **INITIAL HERE**

3. As consideration for being permitted by the Ancient and Honorable Order of E Clampus Vitus to participate in these activities, I hereby agree that I, my assignees, heirs, distributees, guardians, and legal representatives will not make a claim against, sue, or attach the property of the Ancient and Honorable Order of E Clampus Vitus or any of its officers or members for injury or damage resulting from negligence or other acts, howsoever caused, and by any member, agent, or officer as a result of my participation in or travel to and from the CLAMPSITE. I hereby release the Ancient and Honorable Order of E Clampus Vitus and any of its officers or members from all actions, claims, or demands that I, my assignees, heirs, distributees, guardians, and legal representatives now have or may have for injury or damage resulting from my above-described participation at the CLAMPSITE.

### KNOWING AND VOLUNTARY EXECUTION

4. I HAVE CAREFULLY READ THIS AGREEMENT AND FULLY UNDERSTAND ITS CONTENTS. I AM AWARE THAT THIS IS ~~A RELEASE OF LIABILITY AND A CONTRACT BETWEEN MYSELF AND THE ANCIENT AND HONORABLE ORDER OF E CLAMPUS VITUS, ITS OFFICERS, AND MEMBERS AND I SIGN IT OF MY OWN FREE WILL.~~

Executed at \_\_\_\_\_, California, on \_\_\_\_\_ 20\_\_\_\_\_.

Releasor \_\_\_\_\_ (signature required)

☐ Check here if this is a new address.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

e-mail \_\_\_\_\_

PBC's name \_\_\_\_\_ (please include pbc application)

Chapter \_\_\_\_\_

☐ check here if you are a XNGH or NGH

Make your payment out to:  
**BILLY HOLCOMB ECV**  
Mail your payment to:

**GDR Neal Samson**  
**14052 Pear Street**  
**Riverside, CA 92508**

_____ \$50.00	Here is my gold dust, I'll be there!
_____ \$60.00	I'm bringing a PBC, here is his money
_____ \$60.00	My payment is late (after April 24, 2006)
_____ \$5.00	My jackass is sick, keep me on the list
_____	I want to buy a special event shirt.
_____	Add price from the chart below.
_____	<b>Total Payment</b>

### CIRCLE YOUR SHIRT SIZE

Small • Medium • Large • X-Large	XX-Large	XXX-Large
○ \$16.00	○ \$17.00	○ \$18.00

**NO PROMISE OF SHIRT FOR LATE SIGN-UPS!!**





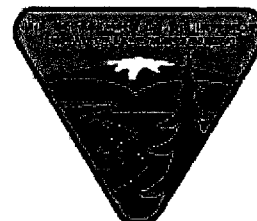
## DESERT STRIKE

In May 1964, U.S. Strike Command (STRICOM) launched the largest military war game since World War II. Known as Joint Exercise Desert Strike, this two-week training exercise simulated a nuclear air and ground battle between the mythical governments of NEZONA and CALONIA over water rights within the Colorado River water shed south of Las Vegas. Two joint task forces, Mojave and Phoenix, involving 100,000 U.S. Army and Air Force personnel, and utilizing over 900 aircraft and 500 tanks, were mobilized to fight for their respective governments. An important training innovation was the creation of an official War Cabinet for each country to lend realism to the games and introduce a political dimension to the escalation of nuclear war requiring judgments about when nuclear or chemical weapons should be used. On May 25, 1964, two elements of the 1st Battalion "Tomahawks" under the command of Colonel Robert S. Dickson - the 501st "Geronimo" Parachute Infantry Regiment and the 101st Airborne Division "Screaming Eagles" - were parachuted 30 miles behind 'enemy' lines near this vicinity. It was 1st Lieutenant Dickson who, prior to D-day during World War II, had given the 101st Airborne Division their renown name, the "Screaming Eagles." Fulfilling their Desert Strike mission, they seized a critical pass held by 'enemy' armor units. An umpire halted the exercise shortly after contact with the enemy was made. Desert Strike also led to new tactics for military river crossings on the nuclear battlefield. When NEZONA invaded CALONIA, instead of a using a single, concentrated troop crossing across the Colorado River, new tactics required numerous crossings along a broad front to diminish the effects of a theater-wide nuclear detonation. This training maneuver took place on more than 13 million acres of public and private lands in the California, Nevada, and Arizona deserts at a cost of 54 million dollars, or 540 dollars per man. This monument is dedicated to the Cold War veterans who served here and especially for the thirty-two warriors who gave their lives during this exercise which in itself, contributed to the end of the Cold War.

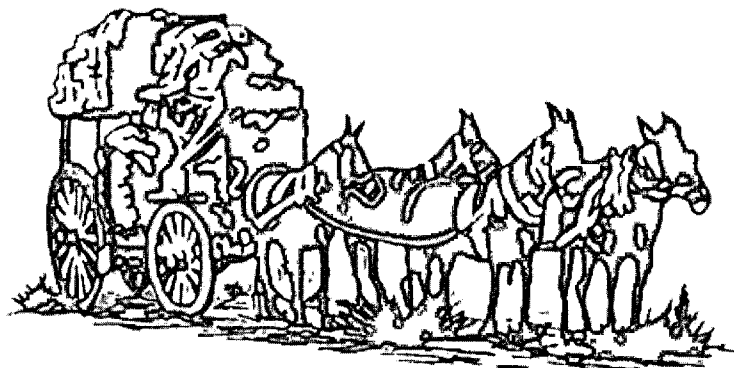
This plaque placed by the ancient and honorable order of E Clampus Vitus,  
BILLY HOLCOMB CHAPTER 1069 and the 101st Airborne Division Association.

In Cooperation with the  
United States Department of Interior  
BUREAU OF LAND MANAGEMENT  
PALM SPRINGS FIELD OFFICE

May 6, 2006



*A Short History of the*  
**Randsburg-Mojave Road**



*and surrounding area  
prepared for the*

**Southern Alliance of  
E Clampus Vitus**

*On the occasion of the*

**SOUTHERN ALLIANCE IV  
SIX-CHAPTER JOINT CLAMPOUT  
October 13, 14, 15, 2006/6011**

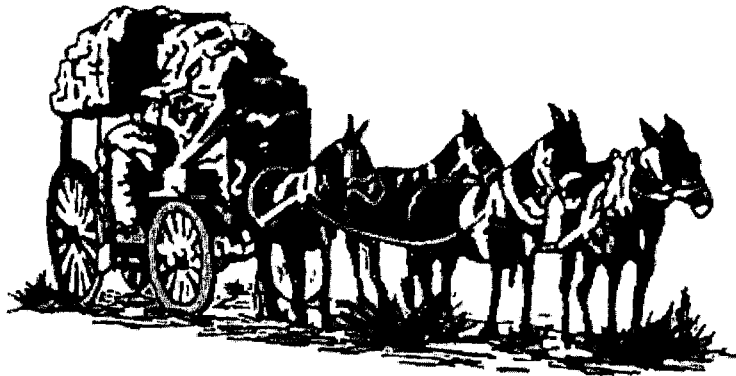
***Plaque Dedication- Saturday, October 14, 2006  
10:00 AM***

*Junction of Randsburg-Mojave Road and Twenty-Mule Team Parkway  
California City, California*

**In cooperation with  
California City, East Kern Historical Museum Society  
and the**

**Rand Desert Museum**

*A Short History of the*  
**Randsburg-Mojave Road**



*and surrounding area  
prepared for the*

**Southern Alliance of E Clampus Vitus**

*Peter LeBeck #1866 (Host Chapter) ..... Paul Weaver, NGH*  
*Billy Holcomb Chapter 1069, ..... James A. "JJ" Jackson, NGH*  
*Lost Dutchman Chapter 5917+4, ..... Barry "Bearly" Christensen, NGH*  
*Platrix Chapter 2, ..... Abe Hoffman, NGH*  
*Queho Posse Chapter 1919 ..... Jeff "Con Man" Hayden, NGH*  
*John P. Squibob Chapter 1853 ..... John Eugenio, NGH*

*On the occasion of the*

**SOUTHERN ALLIANCE IV  
SIX-CHAPTER JOINT CLAMPOUT  
October 13, 14, 15, 2006/6011**

***Plaque Dedication- Saturday, October 14, 2006***

***10:00 AM***

***Junction of Randsburg-Mojave Road and Twenty-Mule Team Parkway  
California City, California***

**In cooperation with  
California City, East Kern Historical Museum Society  
and the  
Rand Desert Museum**

## Table of Contents

<i>The Randsburg-Mojave Road - Steve Born, XNGH.....</i>	<i>2</i>
Rice & Shippee .....	2
Coming of the Automobile Age.....	3
<i>Rand Mining District- Robert Clemensson, Peter LeBeck Chapter.....</i>	<i>4</i>
Randsburg and the Rand Mountains .....	4
Garlock .....	5
Johannesburg .....	5
Atolia.....	6
Red Mountain.....	6
<i>20-Mule Team Borax Routes- Mike Johnson, XNGH .....</i>	<i>7</i>
The "Twenty Mule Team Borax" Road .....	9
<i>A Short History of Mojave- Mark Hall Patton, XNGH .....</i>	<i>12</i>
<i>Mojave Spaceport- Steve Born, XNGH.....</i>	<i>13</i>
<i>Bibliography.....</i>	<i>14</i>
<i>Monument Dedication: Randsburg Mojave Road.....</i>	<i>15</i>

## Acknowledgements

The six chapters of the Southern Alliance of E Clampus Vitus would like to extend sincere appreciation to **Pat Gorden** of the East Kern Historical Museum Society, **Dr Larry Adams**, Mayor and **Bill Way**, City Manager of California City for their support, cooperation and eagerness to support us in commemorating Western History in this area. Clamper **Bart "HAFDOG" Parker**, curator of the Rand Desert Museum provided extensive help researching the Randsburg Mojave Road. We also extend thanks to the **BLM Rangers** of the Ridgecrest Office for helping us arrange our Clampsite for this weekend.

Event Cochairman .....**Steve Born, XNGH, Peter LeBeck Chapter**  
 Event Cochairman .....**Eugene Duncker, XNGH, X-Proctor, Peter LeBeck Chapter**  
 Thanks are due to the officers and members of host chapter. **Peter LeBeck** #1866 for their continued efforts.

Special thanks to **JJ Jackson**, NGH of **Billy Holcomb Chapter** and all of his hardworking officers and members who helped physically organize this huge event.

Thanks to all the officers and members of **Lost Dutchman Chapter, Platix Chapter, Queho Posse and John P. Squibob Chapter** who contributed to make this the unbelievably successful event, it has been!

## Writers of this Keepsake

**Steve Born, XNGH, Peter LeBeck Chapter; editor**  
 Randsburg Mojave Road; Mojave Spaceport.

**Bob Clemensson, VNGH-elect, Peter LeBeck Chapter- Rand Mining District.**

**Mike Johnson, XNGH, Billy Holcomb Chapter- 20-Mule Team Borax routes,**  
**Mark Hall Patton, XNGH, Queho Posse. History of Mohave; aviation in the area.**

Printing by Smitty- He is not responsible for any mistakes!

Those are solely the responsibility of the editor, who did not give Smitty enuf time!

# **The Randsburg-Mojave Road -**

**Steve Born, XNGH**

In 1876, Charles Crocker, president of the Southern Pacific Railroad, drove a golden spike at Lyons Station near Newhall, celebrating the completion of the Southern Pacific route into Los Angeles. This finally linked Los Angeles to the northern portion of the state by rail, and assured its place as a major center of commerce and shipping in Southern California. The line descended from the famous Tehachapi Loop down to Mojave and then continued through the Newhall area to Los Angeles. This provided a rail link, not only to Los Angeles, but also to its harbor. By 1884, when Southern Pacific (SP) and the Atlantic & Pacific (A&P) [controlled by Atchison, Topeka & Santa Fe (AT&SF)] entered into a "joint trackage" agreement, there was another line connecting Mojave to Needles and the east, by way of Barstow.

In 1895, when major gold strikes drew miners, supplies and business to the Rand Mining region, there were two railroad stations, which served the area- Mojave on the main SP line, and Kramer Junction, thirty-eight miles east of Mojave (two miles west of present day Kramer, at the junction of Highways 58 and 395).

The Koehn-Garlock route already carried stages and freight north of the Rand Mountains from Mojave, and supplied miners in the El Paso Mountains and Goler. In 1895, service was extended to Randsburg, a total distance of 54 miles. Stages took eight hours or more to make the arduous trip. Garlock (formerly Cow Wells) was of major importance, because it was the only place in the region with sufficient water for a stamp mill to process the Randsburg ore.

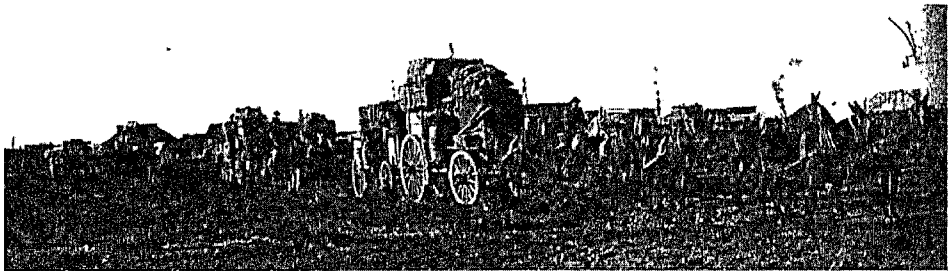
By late 1896, rail shipping through Kramer necessitated a Kramer-Randsburg stage and freight runs some thirty miles north to Randsburg. There were soon calls for a railroad to Randsburg. By May 1897, the Randsburg Railway Company was organized; but before track was laid, the A&P ceased to exist and a similar agreement was made with Santa Fe. Things moved fast! By December 1897, the Randsburg RR was completed to Johannesburg. The depot built at Kramer by the Randsburg RR was moved to Boron as part of the Twenty-Mule Team Museum.

## **Rice & Shippee**

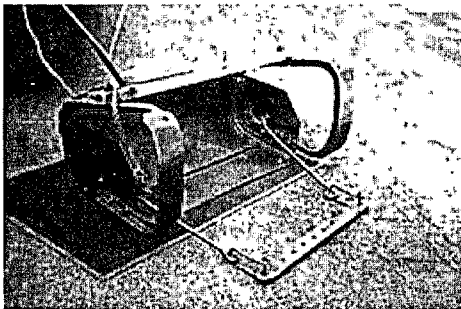
As Randsburg became more important, it became economic to pipe in water, not only for the miners, but also for a stamp mill in Johannesburg. There was also enough demand to build a faster, more direct stage road to Randsburg. In late 1896, Rice & Shippee of Mojave decided to build a new road.

The Mojave end of the William Coleman's Twenty Mule Team road provided the western portion of the new, shorter route. The railroad station in Mojave was west of Highway 14, just south of the intersection of the Highway 14 and Mono Street. The old wagon route went northeasterly through present day Mojave airport. Northeast of the airport, you can pick up the old Twenty Mule Team trail and, with a FWD, follow it across Cache Creek to the edge of California City. (If you look at Yahoo Maps, it is extremely easy to see the trace of the old 20-Mule Team trail in the satellite photos, particularly if you take time to compare the satellite photos with historical maps. For this area, Yahoo Maps has far more detailed satellite photos, as of this date. ) From there, it continued straight through present day California City. The portion east of California City is memorialized today as Twenty Mule Team Parkway. This stretch of the road angles northeasterly from California City, a modern reminder of historical times when borax was king and this desert country resounded to the crack of whips, the braying of mules and the

curses of teamsters hauling the borax to Mojave. The wagons and teams are long gone, but the history remains.



In 1896, The Randsburg Mojave Road was built by Rice & Shippee of Mojave to speed stage transportation from the railroad station at Mojave, to the Randsburg area; service commenced on November 22, 1896. The stage left Mojave at 9 o'clock and arrived at Randsburg at 2 o'clock, just five hours after leaving Mojave. This new route was only 36 miles, versus the 54-mile (and eight hour) route through Garlock. The cost of a one-way ticket was three dollars. The Randsburg Mojave road angled north from the 20-Mule Team road, cutting miles and time from the journey. Nearing Randsburg, the road went through the hills to the west of present day Highway 395.



How did they grade roads in the late nineteenth century California? Over 200 patents are credited to prolific Scottish inventor James Porteous, who founded the oldest continuous business in Fresno in 1874, originally called Fresno Agricultural Works. (Now known as Fresno Ag Hardware) His most famous invention is the Fresno Scraper, a device that moved large quantities of earth when pulled by a team of horses. In 1941 the Fresno Scraper was attached to Caterpillar tractors and renamed "the bulldozer." Undoubtedly, Rice and Shippee contracted crews to build the new road straight across the relatively flat desert, connecting the old Twenty Mule Team road to Randsburg using Fresno scrapers.

### Coming of the Automobile Age

Ironically, the Randsburg Mojave Road was built in late 1896, at the very end of the horse drawn era of transportation. By 1915, the automobile had drastically changed things. "When Tungsten first jumped there two automobiles in Randsburg. Today there are 200 to be seen on main streets most any evening. Auto stages running over to Barstow... (and) Mojave. Miners... (would) ride out to work and come into town in machines." You could pay your fare on these desert jitneys in coin or tungsten. "Louis Nikrent drove Cactus Kate across the desert from Mojave at 45 miles an hour. Slowing down for only two washes and three sharp turns. Between Saugus and Mojave the road is in perfect condition..." (Los Angeles Times, April 30, 1915)

Kern County surveyed the Randsburg-Mojave Road in 1924 and took possession of it as County Road # 636.

# **Rand Mining District-**

## **Robert Clemensson, Peter LeBeck Chapter**

Is South Africa in the Mojave Desert of Kern County? No, but the famous South African Rand mine has similar gold ore. When Frederic Moorers, Charles Burcham and John Singleton discovered similar gold ore in 1895, they named it the Rand Mine (later changed to the Yellow Aster Mine).<sup>1</sup> How did these miners travel to their diggings?

The Randsburg-Mojave Road was a major route from Mojave's railhead and supply base. Roberta Starry in her book Exploring the Ghost Town Desert states: "... a route traveled in 1898 by ore wagons, stage coaches and spring wagons ... hauling their gold to Mojave for meeting the train or replenishing supplies or on their way out to 'civilization'." <sup>2</sup>

Because railroad building was very difficult in the mountainous area around Randsburg, nearby Johannesburg became the major supply and shipping point. In 1897, the Santa Fe Railway completed a spur from Kramer to Johannesburg to get the shipping from the mines. It should be noted that the town of Johannesburg was named after the South African city to keep in the same theme as the Rand mine. <sup>3</sup>

Marcia Wynn in her book Desert Bonanza said, "Previous to 1895, the maps carried no mention of such a place as Randsburg". <sup>4</sup> According to the Kern County Surveyor's office, the Randsburg-Mojave Road was finally surveyed and taken into Kern County possession on November 22, 1898. It is County Road # 636.5

The gold mines of the Rand Mining District were many and it is interesting to explore the different mines in this area of Kern County.

### **Randsburg and the Rand Mountains**

The major portion of the Rand mining district (about 50 square miles) lies within Kern County. Located along Kern's eastern border, the district also extends into San Bernardino County for several square miles. Gold was discovered in 1895 with the most prolific producer being the Yellow Aster mine. Very soon, there was a proliferation of mines and claims in the district, which produced gold well past 1910. In fact, even in 2006, the Rand Mining District still has active mining, however, sleepy Randsburg is now famous as a tourist and antique center. <sup>6</sup>

Because of the lack of an appreciable water source in Randsburg, the ore was hauled to the stamp mills in Garlock for milling. However, later it was more economical to pipe the water in from Garlock to Randsburg and the milling was done where the ore was mined.

The Yellow Aster (Rand mine) is believed to have produced a total yield of 12 million dollars and the other mines in the area produced over 2.5 million dollars. This mining continued until 1918, slacked off, and then started again in the 1930's until World War Two for over 20 million dollars, but is again producing in 2006. (5) As the market price of gold increases, it becomes profitable to operate mines that

---

1 William Hamble, Historical Site Markers Kern County, page 106-107

2 Roberta Strong, Exploring the Ghost Town Desert, 1973, page 53

3 William Hamble, Historical Site Markers Kern County, page 106-107

4 Marcia Wynn, Desert Bonanza, page 6

5 Personal communication, Kern County Surveyor's office.

6 William Hamble, Historical Site Markers Kern County, page 106-107

are more marginal. The district was also known for production of silver and tungsten, as we will soon discover.

Randsburg is unique because very few typical, early day mining towns in California's southern desert survived the years. Starting out with gold discovery and moving on in later years to discoveries in silver and tungsten has kept Randsburg a populated town. Today, tourism is a big profit center for the town. <sup>7</sup>

Randsburg had a major hazard that many early mining towns had—FIRE! Randsburg's first recorded fire was on December 2, 1897. This was the first fire in a town without a fire department but it did not amount to much. Less than a month later, a big fire destroyed much of the town. After a short five months, another fire destroyed the town again on May 6, 1898 as reported in the Los Angeles Times. However, a great tribulation happened to Randsburg in 1901-02

At Christmas time in 1901, smallpox appeared in Randsburg. Dr. Baxter a dentist pulled a tooth of a man (who had just come from Arizona), which had blisters on his face. Dr. Baxter went next door to Dr. Macdonald, MD who quarantined most of the town. Dr. Macdonald fumigated the office, vaccinated the dentist, and notified the medical authorities in Bakersfield. There were big Christmas dances in Randsburg and people were traveling by train everywhere. Before the epidemic was over it was estimated that over 500 cases of smallpox in the vicinity. <sup>8</sup>

## Garlock

In 1893, before the discovery of gold in Randsburg, placer gold was discovered in the Red Rock Canyon area of the El Paso Mountains. The Reed nugget, for many years considered the largest ever found, was discovered in a gulch off Red Rock Canyon. Drove of miners came to the area but very few became rich. Much of the activity was around the small settlement of Goler in Goler Canyon. (Goler was named after John Goler, an 1849 Death Valley survivor who left is rifle to mark where he found gold, as he struggled to civilization. When gold was discovered in this canyon, it was named after Goler, in the belief that this was his "Lost Gunsight Mine.") Southwest of Goler was a water hole known as Cow Wells by freighters who watered their animals at the waterhole.

In 1895, the discovery of gold at the Yellow Aster mine turned Cow Wells into a desert gold mining center. The lack of water at the Yellow Aster required that the ore be shipped out to be milled. Eugene Garlock hauled an eight-stamp mill from Tehachapi and set it up at Cow Wells. In 1896, the post office was established there and took the name of Garlock. Besides the milling operations in Garlock, the town became a supply center for the Randsburg area with freighter wagons bringing supplies from the railhead at Mojave.

In 1897-98, a railroad spur was completed from Kramer to Johannesburg. This made it possible to ship ore to Barstow where more efficient milling facilities were located. In 1898, the Golden Aster completed its own 30-stamp mill by piping water from the springs in the Garlock area. Because of these new stamp mills, Garlock was a ghost town by 1899. <sup>9</sup>

## Johannesburg

Johannesburg, or "Joburg" as everyone called it, was more of a family town than just a mining camp. It was a properly laid out town with water piped to the doors of the homes. Johannesburg's also had the

---

<sup>7</sup> Bob Powers, Desert County, 2002, page 38-39

<sup>8</sup> William Hample, Historical Site Markers Kern County, page 104-105

<sup>9</sup> Bob Powers, Desert County, 2002, page 44



Randsburg Railway that had its terminus there. This railroad was approximately 28 miles long and connected with the Santa Fe line at Kramer. Since the railroad was only about a mile from the Yellow Aster Mine, the mine started moving large shipments of ore to Barstow.

The Randsburg Railway was an important factor in Joburg's social structure because visitors came in great numbers. The Randsburg stage met the train in Joburg because the train did not entirely replace the longer stage route between Randsburg and Mojave for years on the Randsburg-Mojave Road.

Joburg also became the staging and freighting center for the mining areas to the east like Searles Lake, Post Office Springs (later Ballarat), Skidoo, Death Valley, and the Slate Mountain Range. Ten and twenty-mule teams were a common sight for years as late as 1911. The town had an active Red Dog Mill for crushing ore, a post office, two general stores, a variety store, billiard and poolrooms, real estate office, two saloons, a music hall, several boarding houses, school, two laundries, two lumber yards, two livery stables, a barber shop and more. Joburg had a telegraph office and a telephone line to Randsburg. However, the town did not have a church! One of the social clubs was the Laurestina Club, which started the "jackrabbit" golf course. This made Johannesburg an "up-to-date town." 10

### Atolia

Atolia, dating back to 1905, was California's first tungsten camp. It was located five miles south of Randsburg at the base of Red Mountain. It had the railroad at its door so tank cars could haul water in. Atolia boomed wildly during World War One and as late as the 1950's was an important source of tungsten. The tungsten boom came in World War One. Tungsten is used as a "hardener" for steel and was in great demand during the war. However, after the boom of the war years the demand lessened when it became more economical to import tungsten from China and other areas.

The name Atolia was the combination of two names belonging to prominent tungsten miners, Atkins and DeGolia. These were the first miners to put up the first tungsten mill around 1907.

Tungsten was very valuable, so the miners were watched like the laborers in South African diamond mines. The miners were searched when they came out of the 900-foot shaft for any high-grade tungsten they might steal. By the end of World War One, the price of tungsten dropped and the cream of the tungsten was gone and mining slowed. 11

### Red Mountain

In 1919, another mining boom came to the Rand Mining District. This time SILVER came from a strike near Red Mountain. This silver strike was one of California's richest and largest discoveries up to that time.

Hamp Williams was the son of Wade Hampton Williams. The senior Williams arrived in California in 1849 and discovered some of the richest gold mines in what was later Kern County. The junior Williams started his life as a cattleman, but lost 1,500 head during the drought that ended in 1898. He then turned to prospecting for gold as his father did before him.

In 1900, he discovered the Cowboy Mine near Paris Lorraine on Caliente Creek near Walker Basin. Then he discovered the Gold Peak Mine in the same area. In 1900, he married Estefena Miranda at a

---

11 Bob Powers, Desert County, 2002, page 45

ranch below Weldon in the Kern River Valley. He built his house one mile from Caliente. In 1914 Hamp Jr. discovered the Pine Tree Mine northeast of Mojave.

Coming to the Rand area in 1919, Williams Jr. and Jack Nosser filed on "Big Silver" and named the mine "The Kelly" after another partner. John Kelley, a former Kern County Sheriff, and Edith Coons, the Kern County Assessor grubstaked the project. Alfred Harrell, owner of the Bakersfield Californian newspaper, bought a quarter of Hamp Williams' interest. Hamp Williams died in his home near Rosamond at the age of 90 in 1961.

The town of Red Mountain was known as one of the wildest, wide-open, boomtowns in mining history. Red Mountain was originally named "Osdick" after Pete Osdick, who pioneered the area from St. Louis in 1903 and lived there or 60 years until his passing in 1963. Red Mountain was a "Lively Twenties" town that provided entertainment for the miners of the Rand mining district, and later, the soldiers at the World War Two Army Air Force base (now Edwards Air Force Base). During Prohibition, people would drive from Los Angeles for the liquor and wide-open prostitution. Rows of cribs (small shacks) where the girls plied their trade can still be seen. Red Mountain was once wild, woolly and rich. Today as you pass by the old buildings on Highway 95, you can almost see and hear the ghosts of the miners and ladies of days gone by. 12

## **20-Mule Team Borax Routes-**

**Mike Johnson, XNGH**

Although gold and silver were the lure that drew men to the desolate Death Valley country in the latter part of the 19<sup>th</sup> century, the real wealth consisted of more humble minerals that lay underfoot. Over countless centuries, the soluble chemicals that leached out of the surrounding hills were concentrated by evaporation in the flat desert playas and lakebeds. Of all these salts, by far the most valuable was borax, which even then was in demand by jewelers, potters, glassmakers and many others, in addition to its better-known use as a laundry detergent. It was easily obtained from the desert floor, but transportation costs cut heavily into the profits. More efficient methods of transport were sought, eventually leading to the use of the world famous 20-mule team borax wagons.

The first Death Valley borax deposits were recognized in 1873 in the midst of a great borax rush, which saw prospectors scouring every saltpan from eastern Oregon to southern California, although they were not exploited at this time. Borax was selling for as much as \$700 dollars a ton, or 35 cents a pound, but the Death Valley deposits were discounted as being too remote to be profitable. The first commercial quantities of borax came from the bed of Searles Lake, near today's Trona, where the Searles brothers, John and Dennis, and two companions filed claims. They formed a mining district and built a processing plant, eventually shipping as much as 2,800 tons of borax a year.

As stated above, the greatest difficulty in the whole scheme was transporting the finished product to market, which at this time was the port of Los Angeles. A freighting company was formed and heavy wagons, some pulled by teams of 20 mules, was put into service for the 250-mile run to San Pedro. Three years later, in 1876, the Southern Pacific Railroad extended its line from Los Angeles to Mojave, and the borax now had to be hauled by wagon only as far as the railhead at Mojave, greatly shortening the route and decreasing costs.

The borax road from Searles Lake followed the route of the present-day Trona Railway to Searles Station, where it forked into a winter and summer route. In the winter months the sand would usually

pack solidly enough for the wagons to travel to Garlock and Cantil. In summer, this road was too soft, and the route swung north, past modern-day Ridgecrest, rejoining the other branch at Cantil. The Searles Lake operation shut down in 1896 when it could no longer compete economically with the borax mined at Calico, near Daggett.

In 1881, the Death Valley borax flats were "rediscovered" by Aaron and Rosie Winters (they of "She burns green, Rosie! We're rich, by God!" fame,) and were duly brought to the attention of William Tell Coleman and Francis Marion Smith, the two men most involved with the production and distribution of American borax.

A mining district was formed, and placer claims amounting to 4,000 acres were filed. Winters then signed his claims over to Coleman for \$20,000. Flush from this success, he and two companions expanded their search and found another, somewhat poorer, borax field near Tecopa, filing claims on 3,000 acres. These claims were also sold to Coleman.

The biggest borax find in Death Valley was discovered in 1882 by Winter's neighbor, Phi Lee, beside Furnace Creek Wash. Coleman's and Smith's men could not have failed to see the deposits, but the conventional wisdom of the time was that borates could be found only on the salt flats, and the "experts" promptly dismissed the importance of these deposits. Lee, in his ignorance, tested the salts anyway and found that they "burned green," thereby discovering a new borax ore, calcium borate, which came to be called colemanite. Lee and his brother continued prospecting and found other colemanite deposits to the east, the Biddy McCarthy and Lila C. claims, which would eventually produce more than \$30 million worth of borate minerals.

Coleman bought up just about every claim in the Death Valley region except for the Eagle deposit, a small salt bed of about 320 acres owned by Isadore Daunet. Daunet shipped the first borax out of Death Valley in the summer of 1882, across the mountains via Wildrose, on the backs of mules. The quality of the borax was poor and this first effort barely paid expenses, so equipment was brought in to better concentrate the borax before shipping it. Daunet contracted with freighter James McLaughlin to haul the finished product the 100+ miles to the rails at Daggett, a station on the new Atlantic and Pacific line. Daunet's companion, Christian C. Blanch, supervised the breaking of the new road through Wingate Pass to Lone Willow Spring, where it connected with the former road from San Bernardino to Panamint City, built in 1873 to serve the booming camp in the Panamint Mountains. From this junction it ran via Granite Wells and Black's Ranch to the Mojave River. Ed Stiles hauled the first load over this historic route in late 1882 with a twelve-mule team, taking eleven days to reach Daggett. This operation ended with the tragic suicide of Daunet in 1884, a subject too involved to address in this article.

Meanwhile, Coleman had begun sending mining and refining equipment to the Harmony Borax works in Death Valley and the Amargosa works near Tecopa Hot Springs in the winter of 1882-1883. He also established Greenland Ranch, the desert oasis now known as Furnace Creek Ranch, to grow alfalfa for the stock, and planted orchards and gardens to help feed the men. The Amargosa works, which were smaller, began shipping borax in the summer of 1882, while the Death Valley works shipped its first borax that fall. Borax could be profitably processed at Harmony only eight months out of the year, since the high summer temperatures at the site impeded the crystallization of refined borax. During the rest of the year operations were shifted to Amargosa, where temperatures were marginally cooler and the borax could be refined more efficiently, although the deposits here were too poor to work year round.

Charles Bennett, who had gone into the freighting business after selling his ranch to Aaron Winters, contracted with Coleman in 1883 to haul the borax to Daggett via Saratoga Springs, Cave Spring, Garlic Spring, and Coyote Well. In the fall of that year he began running wagons over a road that had to be "graded" across Devil's Golf Course by sledgehammer-wielding Chinese laborers. That road proved difficult, and Bennett soon found a better way, leaving the road to Daggett at Granite Wells and heading west for Mojave. When the work shifted to Amargosa in the summer, the borax was still hauled to Mojave, traveling along the old Walker cutoff from Saratoga Springs to Granite wells via Owl Hole Spring and Leach Spring. By mid-1884, Bennett had nine eighteen-mule teams at work on the road to Mojave.

### **The "Twenty Mule Team Borax" Road**

When Bennett's contract expired, lower borax prices caused Coleman to try to trim costs by doing his own freighting. Coleman's superintendent was Rudolph Neuschwander, and Neuschwander's foreman was John Perry, a former San Francisco druggist. Perry had been studying the freighting operations, and built five pairs of huge wagons, specifically designed to carry borax, in Mojave. He assembled five teams, each consisting of eighteen mules and two horses, to haul them. Teams of this size, and larger, had previously been used at various times and places throughout the West, but these five teams would be immortalized by the Pacific Coast Borax Company's advertising campaign for "20 Mule Team Borax."



The round trip from Death Valley was about 330 miles, and took twenty days. One team loaded and left the borax works every four days, so rigs were constantly on the road. To avoid the worst of the desert heat, the teams were used on this run only from mid-September to mid-June. The teamsters received their pay in Mojave, where they had an afternoon and a night to entertain themselves before hitting the road again the next morning.

By 1886, the Harmony Borax Mining Company was producing two million pounds of borax a year from its Death Valley and Amargosa operations. In that same year, the company started shipping about the same amount from new beds discovered near Calico. This doubled the supply of American borax without a corresponding increase in demand, and prices inevitably fell. Production was cut back to stabilize prices. This proved effective, but such remedies came too late for Coleman. By this time he had turned over day-to-day operations to his junior partners, whose ill-fated attempts to take over the Pacific canned salmon industry and to corner the American raisin market failed, with drastic financial consequences. Coleman attempted to sell off his Death Valley borax operations to bail the company out, but all such efforts failed, and the Coleman dynasty collapsed in May of 1888.

The Harmony Borax Mining Company promptly ceased operations, never to resume. Francis Marion Smith bought Coleman's borax properties from his creditors in 1890. He consolidated his holdings into the famous Pacific Coast Borax Company and truly became the "Borax King." He commenced operations at his properties at Borate, near the former silver town of Calico, and called two of the twenty-mule team rigs out of retirement to haul borax to the rails at Daggett. Because of the shorter distances involved a single outfit could haul fourteen loads of borax to Daggett in the same time it took for one run from Death Valley to Mojave. As output increased, two new rigs were built to keep up with the demand.

It was during this time that the huge wagons and long-line teams began to receive nationwide attention. Publicity photos were common, and "20-Mule Team" became household words. This operation continued until 1898, when Smith completed the narrow-gauge Borate and Daggett railroad to transport the borax, thus putting the teams out of business for good.

The portion of the old route from the Death Valley country to Mojave is memorialized today as Twenty Mule Team Parkway. This stretch of the road angles northeasterly from California City, a modern reminder of historical times when borax was king and this desert country resounded to the crack of whips, the braying of mules and the curses of teamsters hauling the borax to Mojave. The wagons and teams are long gone, but the history remains.

# DEATH VALLEY AND AMARGOSA BORAX ROUTES

TO

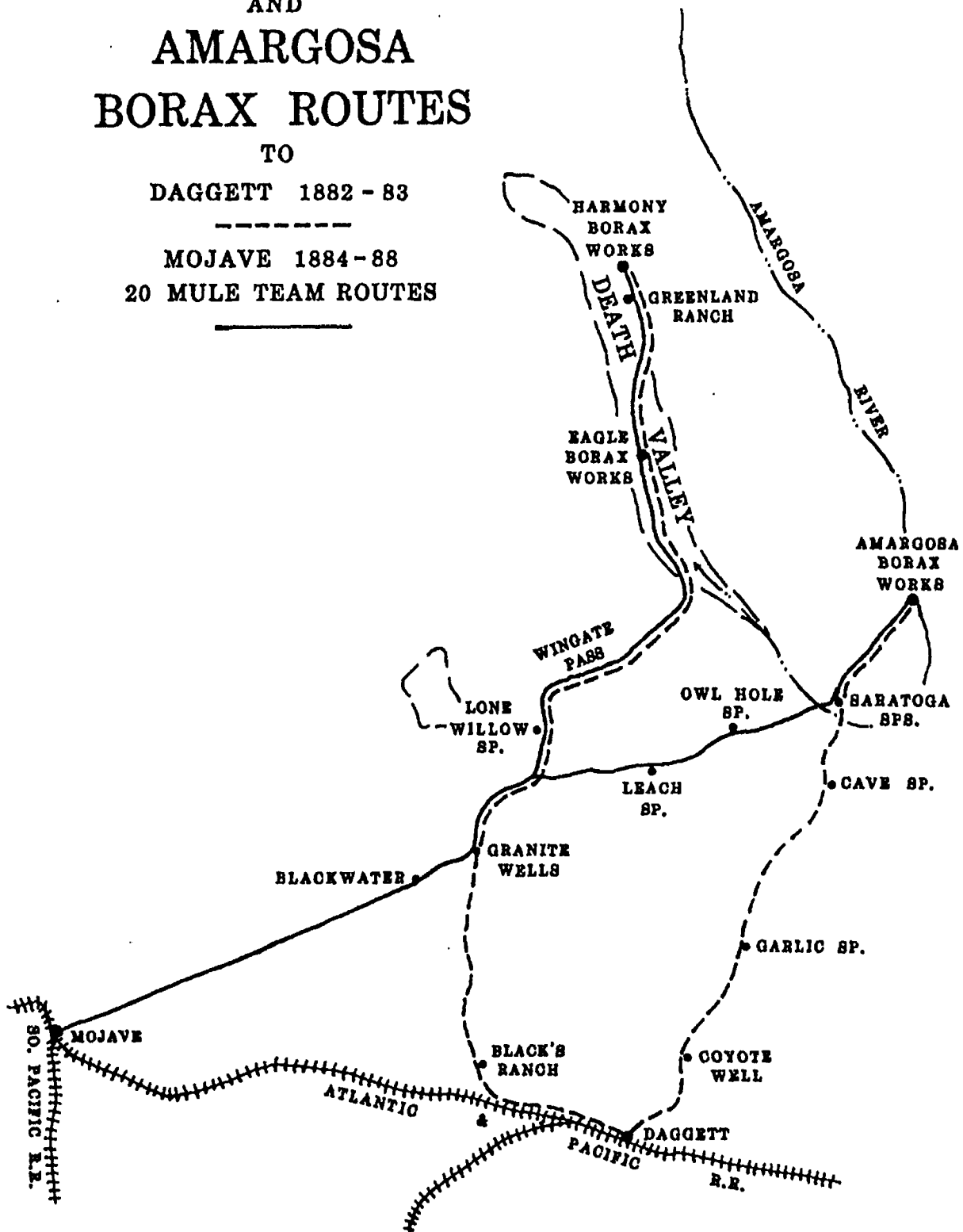
DAGGETT 1882 - 83

-----

MOJAVE 1884 - 88

20 MULE TEAM ROUTES

-----



# A Short History of Mojave-

Mark Hall Patton, XNGH

## *Wagons, Railroads, Airplanes and Spaceships*

The community of Mojave exists because of its vital location on transportation routes through the desert. Originally founded by the Southern Pacific railroad as a stop before the Tehachapi Pass, Mojave dates its founding from the first rail service on August 8, 1876.

Many early explorers, including Father Francisco Garces, knew the area. The earliest trail, which passed through the area, was the Midland Trail, located about where Highway 14 passes north of the town.

The new community was a success from the start, serving as both transportation hub and ore transshipment point for the nearby mines. The original railroad, the Southern Pacific, served Mojave to Needles. Part of the reason for the Southern Pacific's interest in the area, was to stop a rival, the Atlantic and Pacific, from building through the area. Unfortunately, this plan was unsuccessful, as the Santa Fe eventually bought the route from the SP in 1898, providing the Santa Fe (now part of the Burlington Northern Santa Fe) with a route over the Tehachapi.

With the amount of money lost in the battle over routes, when the San Pedro, Los Angeles and Salt Lake City was being built in the early 20<sup>th</sup> century, the Santa Fe and the upstart line quickly agreed on a plan to allow the new railroad to use part of the existing Santa Fe track between Daggett and Riverside. It was a popular stopping point for travelers, and was home to the Morrissey Hotel starting in 1876 and later a well-known Harvey House, operated by Fred Harvey in the railroad depot.

Gold was discovered in Goler Canyon in 1893, about 35 miles northeast of Mojave. This brought new interest in the vicinity and the small community. Other local mining locations produced borax, perhaps the best-known local product. Borax was an especially important product in the late 1880s, when the 20-mule teams from Death Valley hauled it to the railhead at Mojave.

Aviation came into the Mojave region in 1933, when a detachment from March Army Air Field set up temporary bombing and gunnery ranges on the bed of today's Rogers Dry Lake, about 20 miles from Mojave. This dry lake bed, and its neighboring Rosamond Dry Lake, were originally used as a water stop for the railroad, starting in 1876, and were first settled about 1910 by Ralph, Clifford and Effie Corum. The Muroc name came from reversing the letters in their last name, and was the name for the base throughout World War II.

In 1950, the now Air Force base was renamed Edwards Air Force base in honor of test pilot Glen Edwards who was killed testing the Northrop YB-49 Flying Wing. It is one of the best-known test flight centers in the world, and boasts the longest runway in the United States. The Space Shuttle often lands at Edwards.



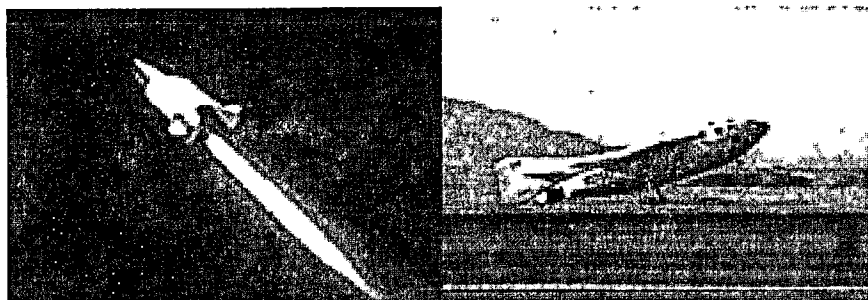
Aviation also became a part of the city of Mojave before World War II. With the opening of the Mojave Naval Air Station in 1942, however, aviation took off. The Naval Air Station became today's Mojave Airport. In the 1970s, the large airport became home to many mothballed aircraft, as changes in airline needs and the effects of deregulation brought hundreds of aircraft to the field in the desert. The inexpensive tie-down rates encouraged the use of the field as a holding site for aircraft, which were being sold by one airline to another. Since not all the aircraft would be sold, new businesses grew around the dismantling of mainly commercial aircraft. Within the last few years, nearly all of the Convair 880 and 990 commercial jets were dismantled at the Mojave airport.

Perhaps the best-known private aviation engineer/inventor to make Mojave his base of operations is Burt Rutan. His Voyager, which made the first non-stop around-the-world flight was developed and took off from the Mojave airport.

## **Mojave Spaceport-**

**Steve Born, XNGH**

The Mojave Airport, home of the National Test Pilot School, Burt Rutan's Scaled Composites and XCOR Aerospace, is also "America's First Inland Spaceport" having received official licensing by the Federal Aviation Administration for Commercial Space Transportation. A launch-site operator license was granted to the Mojave Airport on June 17, 2004. The paperwork cleared government in-and-out-box procedures just in time.



SpaceShipOne

The civilian Mojave Spaceport was the takeoff and landing point for the record-setting attempt by SpaceShipOne, the first non-governmental rocket ship to successfully fly to the edge of space, earning pilot, Mike Melvill, the first set of FAA issued commercial astronaut wings. Upon touchdown at Mojave and climbing out of the SpaceShipOne's cockpit, Apollo moonwalker, Buzz Aldrin, greeted Melvill. Another flight might be needed before committing pilot and hardware to fly back-to-back flights within a two-week period to win the \$10 million Ansari X Prize.

## Bibliography

Hample, William G, Historical Site Markers Kern County. Kern County Historical Society, Bakersfield, California, U.S.A., 1991.

Powers, Bob. Desert Country. Arthur H. Clark Company, Spokane, Washington. 2002.

Lingenfelter, Richard, Death Valley and the Amargosa: A Land of Illusion, University of California Press, 1986.

Serpico, Phil. A Road to Riches: The Randsburg Railway Company and Mining District. Omni Publications, Palmdale, California. 2004

Starry, Roberta Martin and Suzanne Knudson. Exploring the Ghost Town Desert, Second Edition. Engler Publications, Woodland Hills, California. 2000.

Starry, Roberta Martin. Gold Gamble. Maturango Museum of Indian Wells Valley, China Lake, CA USA, 1974.

Wynn, Marcia Rittenhouse. Desert Bonanza: the story of Early Randsburg, Mojave Desert Mining Camp. Arthur H. Clark Company, Glendale, California. 1963.

## Monument Dedication: Randsburg Mojave Road

The Randsburg Mojave Road was built by Rice & Shippee of Mojave to speed stage transportation from the Southern Pacific railroad station at Mojave, to the rich gold mines in the Randsburg area; service commenced on November 22, 1898. The stage left Mojave at 9 o'clock and arrived at Randsburg at 2 o'clock, just five hours after leaving Mojave. This new route was only 36 miles, versus the 54-mile (and eight hour) route through Garlock. The cost of a one-way ticket was three dollars.

The route followed the Twenty Mule Team Mojave/Death Valley road (1883-1889) from Mojave to this point, and then angled north; near Randsburg the old road went through the hills to the west of present day Highway 395.

Besides gold, the Rand mining region produced tungsten (essential to World War One hardened steel production) in Atolia. A rich silver strike south of Johannesburg in 1919 gave birth to wild, wooly and rich Osdick (later Red Mountain).

By 1915, the automobile was replacing horse drawn transportation. Stages still ran between Randsburg and Atolia; but auto stages ran to Barstow and Mojave. Locally, miners could ride to work and come back to town in the evening in desert "jitneys".

In 1924, Kern County surveyed the Randsburg-Mojave Road and took possession of it as County Road # 636.

Dedicated on October 14, 2006  
Southern Alliance of E Clampus Vitus  
Peter LeBeck Chapter, Billy Holcomb Chapter,  
Queho Posse, Platrix Chapter,  
Lost Dutchman Chapter and John P. Squibob Chapter

In cooperation with  
California City, East Kern Historical Museum Society  
Rand Desert Museum

*Thanks to the plaque erection crew, who came out there last Saturday to construct the monument*

*Joe Szot  
Bob Clemensson  
Bob Cordes  
Ron Nauke  
Steve Born*

*Jim Jackson  
Rusty Amodeo  
Mike Johnson  
Mike Smith (plaque # 73)*

*Don Johnson  
Gary Bancroft  
Dave Dutcher  
Phil Holdaway  
Gene Duncker*

# WANDSWORTH-MOJAVE ROAD

Fall 2006



Emergency Medical Services • Critical Care Transport  
Long Distance Transport • Patient Transfer  
Helicopter • Ground Ambulance